The Journal of the American Medical Association

Published Under the Auspices of the Board of Trustees

VOL. LVIII, No. 24 CHICAGO, ILLINOIS JUNE 15, 1912

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THE SPECIALIST IN MEDICINE*

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CHICAGO

The practicing specialist in medicine has made for himself a secure position. The advantages afforded by concentration of effort in a restricted field and by closer attention to details have given to the specialist a peculiar opportunity of taking an important part in medical progress. The development of the fundamental sciences underlying medicine owes a great deal to the efforts of the practicing specialist whose studies have reached out to problems in physiology, in anatomy, in embryology and in all of the sciences which touch on his field of work.

The specialties stand out distinctly as outposts along the advanced line of medical progress. The real specialist in medicine, as in any field of work, is one who by persistent and concentrated efforts succeeds in placing himself in touch with this advanced line and in a position where he is able to see and to attack the various unsolved problems in his particular field. The idea of investigation, therefore, is fundamental in the conception of the real specialist whether he be a specialist in medicine or in another subject. The problems in clinical medicine which more often attract the practicing physician differ only in kind from the problems which the distinctly laboratory worker sets out to solve. The practicing specialist in medicine should be familiar with the methods of research and be able to apply them in the study of cases and in the solution of his clinical problems.

Could anything be more inspiring to the young man entering the practice of medicine than the opportunity offered by the specialties, in which, in limiting his work to a particular field, he may hope by concentration and perseverance to get in touch with the advanced line of medical progress and to take an actual part in the solving of its problems? That man who has the perseverance to succeed in this effort has earned the right to be called a specialist in his chosen field. The dilletant in medicine who loiters along the wayside and never makes himself master of his subject is not a real specialist any more than this type ever becomes a recognized specialist in any field of work. We are inclined to use the term specialist too loosely in medicine. Any practitioner who essays to restrict his practice to a particular field thinks he has the right to be called a specialist. He may be a mere dilletant in medicine, and, as far as his knowledge of the specialty goes, an ignoramus pure and simple, yet he may pose before the public as a specialist, an expert, an authority, in a technical and difficult field of work.

This opportunity for concentration of effort and for doing scientific work has attracted to the medical specialties in this country and abroad many from the best type of medical practitioners. These are men who are persevering, aggressive, who have the instinct for investigation and whose efforts have secured for the specialists in medicine their recognized position as consultants, as experts in solving difficult clinical problems. The specialties in medicine are unfortunate, on the other hand, in attracting also a less desirable class of practitioners, men whose chief interest in their work is commercial and who think they see in special practice opportunity for receiving larger returns for their services. In this respect the specialties resemble surgery, which, as compared with internal medicine, attracts a disproportionate share of those less desirable men whose interest in medicine is largely commercial and who lack the full measure of those higher humanitarian instincts which attract many to the study of medicine and which should be a conspicuous element in the character of every one who holds the position of medical adviser in a community. We have to admit that it has been chiefly the surgeon and the specialist and not the consulting internist who have been guilty of the dishonest practice of overcharging and of the division of fees.

We are facing at present in this country a situation which reflects discredit on the general medical profession and particularly on the specialties of the eye, ear, nose and throat. The situation is one that has developed out of our deplorable lack of proper standards in medical education. It has been shown[1] that but a couple of years ago we still had in this country more medical schools than are to be found on the whole continent of Europe. A large number of these are purely commercial, proprietary institutions, with practically no standards and sustained chiefly by clever advertising methods. The result has been an enormous overproduction of "uneducated, ill-trained medical practitioners." We have in the United States, for example, four or five times as many physicians in proportion to the population as exist in an older country like Germany.

The specialties of the eye, ear, nose and throat have had to carry a disproportionate share of these uneducated, ill-trained practitioners, who, failing to succeed in competition with the better trained men in their communities, seek to better their condition by limiting their practice to these special fields. The loose way in which in this country we have countenanced the use of the term specialist has made it possible for these men, with often no further preparation than a few weeks'

* Chairman's address before the Section on Laryngology, Otology and Rhinology of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

1. Medical Education in the United States and Canada. Report to the Carnegie Foundation for the Advancement of Teachers, 1910.

attendance at a postgraduate school, to pose in their communities as qualified specialists in the eye, ear, nose and throat. In many towns, throughout the middle west at least, where the legitimate work in these special fields could be easily taken care of by one, or at most two properly qualified specialists, it is not uncommon to find six or more practitioners advertising on their signs and in the local papers as specialists in the eye, ear, nose and throat. In these cities a larger number of practitioners are sometimes found limiting their work to these specialties than are engaged in the whole field of general practice. It is needless to point out that the public suffers through this overproduction of untrained specialists. It is this type of specialist who justifies the fear so often expressed that the specialist, working in a restricted field, may lose the proper sense of relation between his work and that of the internist. The lack of a proper general medical education and a faulty preparation for special practice give to these men their narrow perspective which makes them disposed to see all human ailments through the particular speculum they may be using.

The postgraduate schools of this country are supported largely by the attendance of practitioners who are seeking courses on the eye, ear, nose and throat. In foreign medical centers, where courses are offered to practitioners of medicine, most of the men taking these courses are Americans, and of these at least 90 per cent. are looking for courses in these specialties. Our postgraduate schools are often blamed for encouraging the development of the so-called "six weeks specialist," the type which the late Professor Schwartze designated as the "pseudospecialist." As a matter of fact, however, the postgraduate schools are doing only that which is demanded of them. When the majority of the men who come to these institutions are uneducated, ill-trained practitioners, who expect after a few weeks' or at most a few months' attendance on courses to return as qualified specialists, what can be done? To meet such a situation only the most superficial, elementary, so-called practical instruction can be given. No sustained effort can be attempted to give that special training in the fundamental sciences of anatomy, physiology, embryology, etc., which should form the foundation for any one who is preparing to do special practice. The courses covering the specialties which are required of the undergraduate student in our best medical schools are superior in every detail to those courses now offered in the postgraduate schools to prospective specialists.

The courses for practitioners both here and abroad naturally fail signally to give that sort of preparation which ought to constitute the fundamental training for every bona fide specialist whether in medicine or in another subject. This is the training for investigation, for research. Courses of instruction, the sole purpose of which is to drill the student in the established facts in medicine, are at best but superficial. The course which leads the student to approach these facts with the open mind of an investigator gives him the training best suited to meet the problems in routine practice. It is not so much the number of facts that a student acquires as it is the methods for investigating these facts that is of greatest value. The question has often been asked why it is that from so many of our physicians who seek postgraduate study abroad so few ever reach that advanced position where they are able to make actual contributions to medical progress. One reason is that most of them have been content in their studies to have facts ladled out to them and have failed to obtain the really important things — the spirit of research and the methods for investigating these facts.

The discredit which the overcrowding of the profession by uneducated, ill-trained practitioners has cast over the specialties in this country is but temporary. The medical as well as the lay public are demanding more and more that the physician who would be recognized as a specialist must have adequate preparation. In this country, just as abroad, he must identify himself with scientific medicine and win his spurs by making some real contribution to medical science. The readjustment throughout the country of the proper relation of the specialist to the general practitioner, the relation of the consultant, the expert, who by perseverance has pushed through to the advanced line in his chosen field, this readjustment will be hastened very much by correcting the existing evils in our system of medical education. Already this is being worked out. Already we can see the passing of the commercial proprietary medical school. Medical education in this country is to be taken over again by the university where it formerly was and where it rightfully belongs. Those spurious medical departments of universities, the attached proprietary institutions, where all that the university gave to its medical school was its name, are already disappearing. In their place will be developed the real university department of medicine, in which the idea fundamental in any department of a real university, the idea of investigation, will be made prominent. It is toward this goal that the trend of medical education is leading.

We are still far from the realization of an actual university department of medicine, although we have passed the stage where a self-respecting university willingly permits its name to be attached to a proprietary medical college. We recognize that a medical school organized as is the proprietary medical college cannot be called a bona fide department of a university. It will take time and patience to work out the development of the university department of medicine from the existing type of medical school, for there remains a long step between the medical school as it still exists in this country and a bona fide department of a real university. The full significance of this difference will not always be recognized by men who have grown up in the atmosphere of the proprietary medical college. These men are often found opposing the introduction of university ideas and university methods in medical teaching on the plea that the medical student needs practical as opposed to scientific instruction, that the research man is not the best instructor, etc. They are all anxious enough to have the institution called the medical department of a university but are opposed to the introduction of those methods and ideas which alone can make it a bona fide department of a university. Actual progress in the development of the real university department of medicine must come chiefly from the university. The American Medical Association, working through its Council on Medical Education, has in a very few years accomplished a great work, especially toward standardizing the entrance requirement for medical schools, but the keynote to the medical school of the future, the university department of medicine, must come from the university itself, where alone the ideals and aspirations of university instruction are fully appreciated. President Shurman, in an address on "The Obligation of the University to Medical Education," has sounded this note where he says: "Have done with this sham in medical education . . . let this

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new institution be not an attachment (or detachment) to the university but an organic and vital member like other departments of the university, and, like them, animated by its spirit and controlled by its standards."[2]

If the undergraduate instruction in medicine ought to be in the hand of the university, even more urgent is it that the real postgraduate instruction must be undertaken by the university. When the undergraduate instruction in medicine has been thoroughly done, the elementary work in the specialties will not need the "subsequent patching" which is all that the existing postgraduate schools are prepared to do. Real postgraduate instruction in medicine can develop only in connection with a university department of medicine, not in separate, so-called postgraduate institutions. When once the universities have completed the process of taking over the undergraduate instruction in medicine and have established real university medical departments, it is their problem to provide suitable courses for the training of the medical specialist. Such courses should be arranged to cover at least two or three years' work after the undergraduate instruction in medicine has been completed. They might very properly be of such a character as to lead to the higher degree in medicine, the degree of doctor of philosophy, for example, in ophthalmology or otology. These specialties are fully as technical and as far removed from general medicine and general surgery as is dentistry, yet the state requires of the dentist three years' special training. The public is entitled to at least the same protection from untrained specialists in medicine as from untrained dentists, particularly since the work in these specialties is the more difficult and also more dangerous. The development of the specialties in medicine is so recent that we have not as yet become thoroughly adjusted to the new situation. The training of the specialist presents an entirely new problem in medical education. The feeble efforts that have been made in postgraduate schools to supply this training have fallen far short of really solving the problem. When once the proper facilities are offered by the universities for adequate training in the specialties, it is but a short step for the state to require this training before the practicing physician can enter special practice.

All that we offer now for the training of the specialist is an attempt to provide the top story of his preparation, the purely clinical aspect. Is it any wonder that so many, doing special work with this sort of preparation and no adequate general medical training, become top heavy and overtreat patients locally who should be referred back to the general physician? It is no surprise that under these conditions the nearest approach to a scientific contribution, from so many who share this advantage of working in restricted fields, is the more or less garbled case report. The surprising thing is that with conditions as they are at present there should have developed in this country so large a body of real scientific specialists, men who have mastered their subjects, who are doing aggressive work in real medical progress, and who easily take their position among the foremost practicing specialists in the world. We have much for which to be proud and when once our temporary impediments have been removed, when conditions in this country are made more favorable for the development of the trained scientific medical specialist, we may confidently hope to take a much more prominent part in the progress of medical science.

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2. THE JOURNAL A. M. A., April 16, 1910, p. 1251.

ANIMAL EXPERIMENTATION AND ITS BENEFITS TO MANKIND*

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OBSERVATION AND EXPERIMENTATION

Two ways are open to us for obtaining a knowledge of Nature: We may merely watch natural events as they occur, or we may arrange conditions so that the events will appear or disappear, or be modified, as we may wish. For example, the growth of wheat we may study carefully in different native surroundings, or we may place the wheat where we can at will examine the effect on it of heat and cold, sunlight and darkness, wind, gravity, drought and the chemicals of the soil, as these various agencies affect its growth and productiveness. The former method is purely observational, the latter is experimental. The experimental method, in which the conditions to be observed are under control, is, in the main, the distinguishing procedure of modern science.

There is nothing mysterious about experimentation. The method implies first that study of natural events suggests certain explanations for their occurrence, as, for example, that lime in the soil or high temperature makes hard wheat, and that the cautious person, instead of immediately accepting suggested explanations as true, prefers to put them to test.

Of the two methods of learning about Nature, the experimental has proved much more fruitful than the purely observational, chiefly, I think, because experimentation is concerned with means of controlling natural forces. The different sciences, however, are subject to the application of the experimental method in different degrees. Most subject to it are chemistry and physics, since of all the natural sciences they are most simple. As a result of the employment of experimentation, astounding advances have been made during the past hundred years in chemistry and physics, and in their industrial applications. All about us are innumerable instances of the practical benefits that have flowed from the experimental study of Nature in its physical and chemical aspects. I need mention only the telephone, the telegraph and wireless telegraphy, steam and gas and electric engines, to indicate how prodigious have been the transformations in civilized society wrought by practical utilization of the scientific discoveries.

There are other sciences, however, that do not lend themselves so readily to investigation by experiment. In consequence our understanding of them is still very defective. Some phases of geology, for example, fall into this class. It has been pointed out that we to-day know little more about the mechanism of the volcano than Pliny when he watched the eruption of Vesuvius that destroyed Pompeii. We cannot control the conditions of volcanic action experimentally, and therefore have only the simple observational method to apply.

THE EXPERIMENTAL STUDY OF DISEASE

In medicine, also, the growth of our knowledge was similarly limited, until about the middle of the last century. Up to that time disease had been studied

* In this paper is summarized evidence which has been presented in detail in pamphlets published by the Bureau for the Protection of Medical Research of the Council on Health and Public Instruction of the American Medical Association. These pamphlets, written by experts in the several fields, are referred to in the present paper and should be consulted by persons desiring further information. A price-list will be sent on application to the American Medical Association.

mainly by observation of sick people. To account for sickness all sorts of theories were advanced, such as bad air, the influence of stars, and mysterious humors and miasms; but these theories were subjected to almost no experimental test. Of course, the highly complex character of living creatures made the beginnings of experimental medicine difficult, for not only do living beings exist together in very complicated biologic relations, but each one is an extremely complex structure, with obscure processes going on within it. In spite of these difficulties, however, the experimental method began about 1850 to be applied systematically to the study of disease, and during the sixty-odd years since then all manner of medical and surgical problems have been experimentally investigated. What has been the result? According to Osler, the experimental study of physiology and pathology during the second half of the last century did more to emancipate medicine from the routine and thraldom of tradition than all the work of all the physicians from the days of Hippocrates (460 B. C.) to Jenner (1749-1823).

In that marvelous period of transformation of medical knowledge and practice the most fundamental discovery was that of the relation between microorganisms and disease. Pasteur, whose name will be forever linked with this discovery, was a chemist who became interested in conditions which produce bad taste in wines. In the "diseased" wines, as they were called, he found unusual microorganisms. "Did they occasion the bad taste?" he asked. To test this idea, it was only necessary to introduce some of these minute plant growths or germs into good wines. This he did, whereupon these wines also were rendered distasteful, and thus Pasteur's idea was substantiated. Later, when his attention was called to a disease in silkworms, he again found microorganisms present and thought that here, also, they might be the source of the trouble. Applying, as before, the test of experiment, he introduced the microorganisms into healthy silkworms and succeeded in reproducing in them the same disturbance. In this case the disease was no less certainly the product of the germ than the oak is the product of the acorn. The idea that all infectious diseases result from these microscopic invaders was a natural and logical next step. Thus originated the bacterial theory of infection.

This theory was soon tested experimentally by many investigators, who studied not only afflictions of the lower animals, but also those of man. And by the numerous proofs that were accumulated, the theory became so firmly established that we now no longer speak of the bacterial "theory" but of the bacterial or parasitic origin of infectious diseases.

TUBERCULOSIS

The study of diseases which we recognize in human beings is of special interest. First in importance among these, perhaps, is tuberculosis. Klencke (1843) and Villemin (1865) had shown that "tubercle" was infectious by injecting into rabbits tuberculous tissue and sputum and thus inducing the disease, but its real nature was not clear until Koch, in 1882, announced the discovery of the germ always found with the disease, the tubercle bacillus. The proof that this germ is the cause of tuberculosis Koch obtained entirely by carefully controlled experiments on animals. He separated the bacteria from tuberculous tissues, made the bacteria grow "pure" outside the body, injected these pure cultures into healthy animals, thereby causing tuberculosis, and then recovered from their diseased tissues bacteria in all respects like the original. Conclusive proof was thus given that tuberculosis results from growth of the tubercle bacillus. All the preventive measures in our great modern campaign against the White Plague are the outcome of these and other experiments on animals. The signs in the street cars warning against spitting are there because animal tests proved that tuberculous sputum is infectious.

Twenty-six years ago Trudeau observed that rabbits inoculated with tuberculosis recovered if kept in the open air and supplied with abundant food, whereas other rabbits similarly inoculated and placed in unfavorable conditions of light, air and food succumbed to the disease. By these observations belief in the value of dietetic and open-air treatment was confirmed; and the further demonstration of the efficacy of such care of human beings afflicted with tuberculosis has led to its universal adoption.

What have been the results of these researches on animals? From them we have learned that tuberculosis is not inherited, that it is communicable and therefore preventable, and that in its earlier stages it is curable. In most countries the death-rate from pulmonary tuberculosis has been steadily declining. In Boston, where for twenty years before 1882 (when the tubercle bacillus was discovered) the death-rate had been about 42 per ten thousand, it fell in the subsequent twenty years to 21 per ten thousand. It has since fallen to less than 18 per ten thousand. That decrease has meant a saving of thousands and thousands of human lives in the city of Boston alone. Throughout the civilized world the reduction of mortality has been incalculably great.

The alternative to these happy results has been clearly stated by Trudeau:

> If it were not for the knowledge which science has won by animal experimentation in the field of this disease in the last twenty-five years, we should still be plunged in the apathy of ignorance and despair toward it, and tuberculosis would still be exacting its pitiless toll unheeded and unhindered.[1]

BUBONIC PLAGUE

Another disease which has brought torment and great disaster to man is bubonic plague. Any one who has read of visitations of this horrifying pestilence knows how mysteriously and how swiftly death spread among large populations, and with what awful terror it was regarded. Defoe, in his "Journal of the Plague Year," in London, tells how the streets became hushed as the infection spread insidiously from parish to parish, how the carts moved about at night receiving the heaped bodies of the dead, and how the bodies were dumped pell-mell and by hundreds into huge pits dug for their burial. Thousands died week after week in the city. In the presence of such tragedy the fright and apprehension of the people caused homes to be abandoned, friends to flee from friends; and when the disease developed, the desperate victims often sought death by suicide or became insane. "People in the rage of the distemper," wrote Defoe, "or in the torment of their swellings, which was indeed intolerable, running out of their own government, raving and distracted and oftentimes laying violent hands upon themselves, throwing themselves out of windows, shooting themselves, mothers murdering their own children in their lunacy." Such was the plague in London in 1665, and such it has been in the great populations of the orient in which it has so often raged.[2]

1. Trudeau: Animal Experimentation and Tuberculosis, Defense of Research Pamphlet II, 1909.
2. In India alone, in the one year 1905, the number of recorded deaths from plague was 1,040,429.

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The mystery of this frightful scourge was lifted when, in 1894, Yersin and Kitasato discovered the germ, *Bacillus pestis*, which invariably accompanies the disease, and when later Simond and others showed, by experiments on animals, that it was spread among rats by fleas, and could be transferred by these same insects from rats to monkeys. The rat-flea also feeds on man when its natural prey is not available. Thus was established the biologic complex by which plague becomes infectious. The attitude of the entire medical world toward the plague was changed by these discoveries, for they suggested a definite program for checking or even abruptly stopping an epidemic.[3] In former times, when physicians were baffled, the people in their fear resorted to "fortune-tellers, cunning men and astrologers," or placed their faith in "antipestilential pills" and "royal antidotes." What futile weapons to combat fleas and rats! Now traps are set, rookeries and vermin-breeding hovels are torn down, and victims already infected are isolated, so that they shall not be the cause of further infection. Through such measures, where it has been possible to apply them, seriously threatening epidemics of plague have been promptly stopped, and the terror of Black Death has been largely abolished. To experiments on rats, guinea-pigs and monkeys we are indebted for this deliverance.

DIPHTHERIA

Another disease in which marvelous benefits to human beings have been secured through animal experimentation is diphtheria. The peculiar bacteria of this disease, noted by Klebs in 1883, were separated in pure culture by Loeffler, and were inoculated into guinea-pigs and rabbits. The characteristic whitish, tough membrane formed at the seat of inoculation. Since the bacteria were found not at all scattered through the body, but only where the membrane joined the living tissues, the conclusion was drawn that death of the animals was probably due to a poison or toxin produced by the bacteria and spread through the system by the circulating blood. These experiments on animals established for all time the rôle of the diphtheria bacillus and its toxin in producing diphtheria.

An even more practical discovery in connection with this disease was that of the mechanism of immunity. In 1888, Roux and Yersin found that if bouillon in which diphtheria bacilli have been growing is filtered and injected into guinea-pigs, it is highly poisonous in very small doses. The inference that diphtheria germs kill by producing a soluble poison or toxin was thus confirmed. Two years later, von Behring and Kitasato, by injecting first small, then increasing, doses of the toxin into goats, discovered that the animals became adapted or immune to the poison, and further that the immunity depended on an antidote or antitoxin contained in the blood. And still more important and surprising, they found that blood taken from an immune animal and injected into normal animals would protect these animals against fatal doses of the toxin, or would even cure animals that had shortly before received the fatal dose. If the toxin was mixed with some of the protective blood or serum outside the body, the poison was completely neutralized; and this mixture of toxin and antitoxin, when injected, had no harmful effect whatever.[4]

It is sometimes said by opponents of animal experimentation that the injection of "diseased blood" of an animal into our bodies is loathsome. This feeling, however, indicates an entire misunderstanding of the natural processes by which our bodies are protected against bacterial poison. Our bodies, when we successfully resist a disease like diphtheria, are protected by the development of antitoxin within us, precisely as the bodies of these laboratory animals were protected against increasing doses of toxin. And when we use antitoxin in treating diphtheria we merely take from the blood of a horse, which has been rendered immune by injected toxin, some of the protective substance which the animal has developed and apply it to increase the protective substance which our own bodies are producing.

What has been the practical outcome of these experimental studies of diphtheria? Dr. Park, of the New York City Board of Health, has shown that in 1893 the death-rate from diphtheria in nineteen large cities of the world was slightly over eighty per hundred thousand population; in 1895, when the antitoxin treatment was introduced, the rate began to drop in almost all the cities; and in 1907 the rate had fallen from the eighty per hundred thousand of 1895 to seventeen per hundred thousand. That this extraordinary change has come gradually is explained by the facts that antitoxin was not at once universally employed, that the value of large doses was not at first recognized, and that the supreme importance of early treatment was not immediately demonstrated. Numerous experiences have shown the marvelous effects of instant injection as soon as the disease appears. In the New York City Hospital for Contagious Diseases among 218 patients treated on the first day there were no deaths.[5] In the Boston City Hospital there have been during the past sixteen years, among nurses, physicians and attendants in the contagious wards, 431 cases of diphtheria. All these persons have received instant treatment; there has not been a single death. The figures that have been gathered are on so large a scale, and are so striking and so precise, that it is impossible to misunderstand them. They prove definitely that the antitoxin treatment has saved from death scores of thousands of human beings.

Death from diphtheria was formerly one of the most frightful modes of death, for the growing membrane led to literal strangulation. Here is Trousseau's classic description of the disease as it occurred in children. It was written about 1870.

> The difficulty of respiration increases in severity. Every hour, or every two or three hours, a suffocative fit comes on. The suffocative attacks follow one another more rapidly, and become more and more violent. From time to time the infant, in a state of excitement which it is impossible to describe, suddenly sits up, seizes the bed-curtains and tears them with convulsive frenzy; he throws himself on the neck of his mother or of those about him, embracing them and trying to clutch whatever he can as a something to hold by. At other times it is against himself that he directs his impotent efforts, grasping violently the front of his neck, as if to tear out from it that which is suffocating him. The puffy, purple face and the haggard, sparkling eyes express the most painful anxiety and the most profound terror; the exhausted child then falls into a sort of stupor, during which respiration is difficult and hissing. The face and lips are pale, and the eyes sunken. At last, after a supreme effort to breathe, the agonies of death begin, and the struggle ends.[6]

3. McCoy: The Relation of Animal Experimentation to Our Knowledge of the Plague, Defense of Research Pamphlet XV, 1910.

4. A large body of knowledge, the science of immunology, has been built on these and other experiments on the resistance of organisms to infection. See Gay: Immunology, a Medical Science Developed Through Animal Experimentation, Defense of Research Pamphlet XVII, 1910.

5. Park: The Rôle of Animal Experimentation in the Discoveries Leading to Our Present Knowledge of the Etiology, Prevention and Cure of Diphtheria, Defense of Research Pamphlet XXII, 1911.

6. Trousseau: Lectures on Clinical Medicine, transl. by Rose and Bazire, i, 342.

With such distressing scenes in hospitals in which diphtheria cases were received, can we wonder that it was difficult to secure nurses who would remain?

The introduction of antitoxin not only reduced the death-rate in the remarkable manner already mentioned, but greatly relieved the distress of the afflicted. The injection of the curative serum soon causes the membrane to roll up, and to be so quickly removed that in most cases the danger of suffocation does not arise. At the meeting of the American Pediatric Society in 1896, when the first experiences with the new treatment were being reported, physicians spoke of the "marvelous" effects they had witnessed, and declared that in years of practice they had never known such surprising results as antitoxin had made possible.[7]

EPIDEMIC CEREBROSPINAL MENINGITIS

Cerebrospinal meningitis is another disease which has claimed its victims by the scores in epidemics which from time to time have swept through our communities. Its mysterious onset and its dreadful power to kill and mutilate spread consternation whenever it appeared, for the physician was helpless in its presence. About seventy-five of every 100 cases ended in death, and the twenty-five patients who survived were often left blind, deaf, paralyzed or imbecile.

The germ causing this disease was discovered by Weichselbaum in 1887, but it was not until twenty years later, in 1906 and 1907, that Flexner developed an effective treatment. This consisted in producing in the horse an antiserum, in a manner similar to that used for diphtheria antitoxin. The antimeningitis serum was first carefully tested by injecting it into the spinal canal of monkeys previously infected with cerebrospinal meningitis, with the result that the serum quickly restored the animals to health. About twenty-five monkeys were used in the course of the investigation.

Already in nearly a thousand cases of epidemic cerebrospinal meningitis[8] the death-rate has been reduced from approximately 75 per cent. to about 25 per cent. among patients treated during the first days of the illness. And even when patients treated late are included, the mortality is only slightly over 30 per cent.

The reduction of mortality, however, is not the only benefit. The curative serum greatly shortens the duration of the disease, and, what is more important, the patient usually recovers without the deafness, blindness and paralysis, and the impairment of mental power, so often the consequence in untreated patients. Dunn has contrasted the appearance of the wards of the Children's Hospital, Boston, now as compared with the preserum days. He writes:

> Formerly there were almost always to be seen wasted little patients lying with head drawn back, neck rigid, limbs twisted and paralyzed, head swollen by hydrocephalus, and other painful conditions, and remaining thus for weeks or months until death resulted. Now the little meningitis patients are soon laughing, talking, and playing with other children, and need not be kept long in the hospital.[9]

Surely this direct result of animal experimentation that has already been manifested in saving for useful lives a half-thousand human beings is to be counted among America's choicest contributions to the "relief of man's estate."

PUS AND SURGICAL ASEPSIS

One of the earliest interests of investigators engaged in experimental medicine was the study of the nature of pus, and of blood poisoning. Pus had been regarded as so necessary for the healing of wounds that its appearance was watched for, and it was designated "laudable pus." Yet accompanying it were much distress and pain and a very high mortality. In our Civil War blood-poisoning (pyemia) was not infrequent, and had a mortality of over 97 per cent. Fifty-one per cent. of the men who had the knee-joint opened died of infection, and of those who suffered a fracture with rupture of the skin about 66 per cent. died. The abdomen and other body cavities were forbidden fields for surgical interference because death so certainly followed the operation of opening them.

Careful microscopic inspection revealed the presence in pus of numerous bacteria. Might not the bacteria cause the pus? If they were excluded might not wounds heal without becoming purulent? Working on this suggestion and on ideas that Pasteur had expressed, Lister watched the healing of surgical wounds in men, and experimental wounds in lower animals, when access of germs to the wounds was prevented by phenol (carbolic acid) sprays and special dressings. The wounds healed without pus! Later it was found that phenol could be dispensed with, and that soaping and scrubbing the skin, and steam-sterilization of instruments and bandages were sufficient precautions against purulent infection; but nevertheless Lister's studies were the beginning of modern aseptic technic. All the astonishing advances in surgery during the past forty years have been made possible through these studies, which were inspired by the results of Pasteur's experiments on animals and in which animal experimentation played a highly important rôle.[10]

Not only in the development of surgical asepsis, but also in the development of surgical operations have animals been useful to man. The surgeon knows where to approach the brain because the parts of the brain associated with different bodily activities have been discovered through physiologic experiments on monkeys. The restoration of cut nerves and the proper method of suturing them have been learned through a series of physiologic experiments. Many successful operations in the abdominal cavity have resulted directly from tests previously made on animals. The possibility of excising without danger a large extent of the small intestine—an operation sometimes necessary—was thus first demonstrated. Various means of making an artificial opening between the stomach and intestine, when the natural outlet of the stomach is blocked, were also experimentally devised. Proper methods of joining the ends of the severed bowel were, likewise, first shown on animals. More recently, by animal experimentation, the surgery of the chest has been developed; and now apparatus has been invented which permits operations on the heart, the lungs, and other structures of the chest cavity, without the disturbing and possibly serious collapse of the lungs—formerly a constant danger when the thorax was opened. And still more recently, through operations on animals, the surgery of blood-vessels has been perfected to such a degree that the effects of dangerous

7. Boston Med. and Surg. Jour., 1896, cxxxv, 13.

8. This form of meningitis should not be confused with other forms; health board statistics often do not differentiate the various types.

9. Dunn: Animal Experimentation in Relation to Epidemic Cerebrospinal Meningitis, Defense of Research Pamphlet XXI, 1911.

10. Keen: Modern Antiseptic Surgery and the Rôle of Experiment in Its Discovery and Development, Defense of Research Pamphlet XII, 1910.

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hemorrhage may be readily treated by the transfusion of blood from a friend or relative to the person in need. These are merely illustrations of the immense advances in surgery during the past thirty or forty years which have sprung directly from experimental methods applied to surgical problems. The release of mankind from distress, disability and long-lasting pain, which has been the consequence of these advances, is beyond all calculation.

CHILD-BED FEVER

Similar to the infection of surgical wounds was child-bed fever. Gordon (1792), Oliver Wendell Holmes (1843) and Semmelweis (1847) had urged that this curse of motherhood was contagious and borne from patient to patient by the attending doctor, but little attention was paid to these claims until Pasteur cultivated the bacteria (streptococcus) from puerperal infection, and by experiments on rabbits demonstrated its power to produce blood-poisoning. The enormous mortality in the maternity hospitals before child-bed fever began to be treated as a disease of bacterial origin is not now well remembered. Not infrequently in former times these hospitals were regarded as the very portals of death. In all countries the death-rate ranged between 2 and 7 per cent. and at times rose to 14, 20 and once, in the Maternité in Paris, to the appalling height of 57 per cent.! In the sixty years ending with 1875, 363,624 women had died of puerperal fever in Prussia alone. Puerperal epidemics were said to be to woman what war is to man. "Like war they destroy the most healthy, the bravest and the most useful portion of the population; like war they take subjects in the flower of their age and spread terror and desolation throughout the territory which they devastate." These sentences were written in 1870.

In 1879, at a memorable meeting of the Academy of Medicine in Paris, the writer of the above sentences was explaining death from puerperal fever as due to atmospheric influences, overcrowding, the tainted air of old wards, or the power of mind over body, and had expressed his disdain for bacterial contagion by predicting that he expected to be long dead before the specific bacterium was discovered, when Pasteur arose, seized a piece of chalk, and drew on the blackboard outlines of the streptococcus. "There!" he exclaimed. "That is the shape of it!"

By use of asepsis, proved effective in preventing wound infection, the mortality from child-bed fever in hospitals has fallen to the neighborhood of 0.1 per cent.—which means an immeasurable reduction of human misery, and the preservation of numberless lives at a time of supreme importance to family and racial welfare.[11]

THE DISCOVERY OF USEFUL DRUGS

Mankind has benefited from animals, not only in learning the bacterial transmission of various diseases and in the improvement of surgical technic, but also in the discovery of useful drugs. Indeed the whole modern science of drug-action is founded on animal experimentation. Consider for a moment what blessings have come from such investigations. All the drugs producing sleep which have been discovered during the past forty years have been discovered by experiments on animals. All the local anesthetics, as cocain, for example, rendering small surgical operations painless, have been discovered by experiments on animals. The only drug which will give prompt relief from the distress of angina pectoris is amyl nitrite—a drug which was discovered during experimentation on animals. All modern drugs for reducing fever; the cardiac tonic, strophanthus; the diuretics, caffein and theobromin; the emetic, apomorphin—were all introduced through experiments on animals. These do not by any means exhaust the list of medicaments discovered by the experimental method applied in pharmacology. Nor do they indicate all the uses of the method in that new science. Through tests on animals, some drugs whose worth was known have had their action more precisely defined; digitalis, for instance, is one of these. Others have been proved harmful; and still others have had their activity standardized. One of the most interesting examples of the use of animals to test the efficacy of drugs is that of ergot—a drug employed to stop hemorrhage, particularly the dangerous hemorrhage that sometimes follows child-birth. Ergot can thus be tested on an animal and proved potent before being placed in the hands of a physician, or it can be tested for the first time on a woman who is bleeding to death—the choice has to be made.

SYPHILIS AND SALVARSAN

A most thrilling recent development in the study of drug action is the discovery by Ehrlich that through extensive selection chemicals can be found which affect specifically the invading germs, with little or no injury to the patient. This discovery has been utilized especially in the treatment of one of the most calamitous and ravaging of diseases, syphilis. In 1903, experimentation with this disease was made possible by Metchnikoff and Roux, who learned that it could be transmitted to monkeys. Later Schaudinn and Hoffmann found the microorganism of the disease, and soon its presence in inoculated animals was demonstrated. At almost the same time, by means of animal experiments, a biologic test, the "Wassermann reaction," was devised, which, when positive, proves the existence of the disease, even in the absence of other signs or symptoms. The value of this test in cases of doubtful diagnosis, or in latent syphilis, is immeasurable. All this experimentation prepared the way for Ehrlich's triumph. After the manufacture and trial of hundreds of substances, Ehrlich found one, number 606 in the series, now known as salvarsan, which when injected into a syphilitic rabbit caused the microorganisms entirely to disappear, and without injury to the rabbit. Then the drug was tested on dogs, without injury. Then two laboratory assistants volunteered to demonstrate the safety of injecting human beings. Only after this was the drug tried on patients. That was hardly two years ago. Even if the final judgment regarding salvarsan sets limits to the first hopes, nevertheless the astonishing results that have already been achieved prove that Ehrlich's experiments on rabbits have added an agency of greatest importance in treating this ancient scourge of social life.[12]

THE USE OF ANIMALS FOR DIAGNOSIS

Prominent among the services of animal experimentation is that of helping in the diagnosis of disease. The *early* diagnosis of infectious disease is essential both for the treatment of individuals and for the prevention of epidemics. We depend on animal tests for determining many of the most serious, socially dangerous afflictions. In tuberculosis, for example, hope lies in early recogni-

11. Williams: Obstetrics and Animal Experimentation, Defense of Research Pamphlet XVIII, 1911.

12. Churchman: The Value of Animal Experimentation as Illustrated by Recent Advances in the Study of Syphilis, Defense of Research Pamphlet XX, 1911.

tion of the nature of the illness. In the first stages the few tubercle bacilli in the sputum may not be observed under the microscope, yet the same material injected into a guinea-pig will clearly demonstrate their presence.

Cultures of the typhoid bacillus, injected into animals, will induce in the blood of the injected animals power to cause typhoid bacilli, and typhoid bacilli alone, to gather in clumps. Thus the blood of the injected animals can be used to detect the presence of typhoid bacilli in suspected persons as, for example, the apparently normal bacillus-carriers, who are such a menace to public health.

Cholera-carriers, and persons afflicted with cholera in mild form, can be discovered by the same method. Indeed the protection of a country from invasion by cholera involves measures in which diagnosis by animal tests is a very important procedure. When we consider that in a single epidemic many thousands have died, and that wide-spread disturbances of commerce and industry have resulted, we can understand the essential value of finding and controlling the first cases.

In the diagnosis of plague, and to a more or less degree in the diagnosis of dysentery, Malta fever, anthrax, glanders, actinomycosis and other microparasitic diseases, animal tests often play an essential rôle.[13]

More and more we are depending on prevention rather than cure to reduce mortality. Without the means of early and correct recognition of the infectious diseases which animal tests have largely provided, the sanitarians, who stand as sentinels in our great cities and along our coasts, would be deprived of their weapons of defense and be rendered useless as protectors of the public health.

PHYSIOLOGY

The first of the medical sciences to use experimental methods was physiology—the science of the normal working of organs. The abnormal working of organs in disease is necessarily measured by the normal standard which physiologic investigation has revealed. Take away from physiologic knowledge that which is based on animal experimentation and almost nothing would be left! Probably no system in the body more frequently requires earnest study by the physician than the circulatory system. As Erlanger has shown, with much thoroughness, practically all that we know of the course of events in the heart, the proper interpretation of the cardiac sounds, the factors determining blood-pressure, the nervous control of heart and arteries, the intelligent treatment of cardiovascular disease—all have resulted from studies on animals.[14] What is true of the circulation is true also of digestion. Through the activities of a succession of investigators who experimented on animals, we now know the changes which food undergoes in each portion of the alimentary canal, the nature of the digestive juices, the condition under which they are poured out and, to a large degree, the causes and character of digestive disorders. Similarly we are now securing, through the brilliant researches of Sherrington and others, illuminating insight into some of the intricacies of the nervous system. These and many other notable contributions to physiology which almost daily stir our wonder at the marvelous organization of the body are the direct outcome of experiments on animals. It cannot be too strongly emphasized that almost the entire structure of physiologic knowledge on which the modern physician bases his judgment—knowledge which to the practitioner makes all the difference between understanding and blind bewilderment—has grown from the application of the experimental method.

CRETINISM

Physiology in cooperation with clinical medicine has also contributed directly to the cure of human diseases. The distressing malady known as cretinism is due to absence of the thyroid gland from birth. Formerly cretins spent their lives as imbeciles, stunted in stature and hideous in appearance. The semibestial aspect, blubber-lips, turned-up nose sunken at the root, wide-open mouth, lolling tongue, small eyes with swollen lids half closed, the stolid expression of the face, the muddy, dry skin—all combined to make a monstrous creature. The physiologic experiments of Schiff showed that implantation of the thyroid gland in the body would prevent the changes caused by extirpation. Then it was discovered that feeding the gland or injecting the gland-extract was as good as implantation. And now absence of the thyroid can be compensated for by administering by mouth either thyroids, or tablets which contain the essential substance, derived from lower animals. The transformation that occurs in the cretinous idiots, when treated early, is nothing short of miraculous. As Osler has said:

> Not the magic wand of Prospero, or the brave kiss of the daughter of Hippocrates, ever effected such a change as that which we are now enabled to make in these unfortunate victims, doomed hitherto to live in hopeless imbecility, unspeakable afflictions to their parents and to their relatives.

ANIMAL DISEASES

I have now presented evidence which proves that our knowledge of the disastrous infections and our consequent ability to control them, both in individuals and in communities, have been derived directly from repeated, carefully-planned experiments. The immense saving of life which has resulted is not confined to human beings, however, but is shared by the lower animals as well. I need only mention tuberculosis, anthrax, glanders, hog-cholera, Texas fever and rabies, to indicate diseases which have in the past caused the destruction of domestic herds in enormous numbers, with vast economic losses. Happily the measures taken to protect the lower animals against infection can be more rigorously enforced than those used to save human life, and the results therefore are all the more striking. By means of preventive measures and by protective inoculations, some diseases of cattle have been entirely abolished in this country, and others have been so promptly and radically dealt with that they have seldom made serious headway.[15]

PREVENTIVE MEDICINE

That there is the same possibility of protecting human beings against diphtheria and rabies, against malaria and yellow fever, and against many other infections has long been known.

The oldest of the protective measures is that of vaccination against small-pox. This ravaging pestilence has been reduced, in a most striking manner, in every civilized country in which vaccination has been employed.

13. Rosenau: The Rôle of Animal Experimentation in the Diagnosis of Disease, Defense of Research Pamphlet III, 1909. Also Richardson: Animal Experimentation in the Development of Our Knowledge of Dysentery, Cholera and Typhoid Fever, Defense of Research Pamphlet VIII, 1910.

14. Erlanger: Animal Experimentation in Relation to Practical Knowledge of the Circulation, Defense of Research Pamphlet XIII, 1910.

15. Moore: Animal Experimentation; The Protection It Affords to Animals Themselves and Its Value to the Live-Stock Industry of the Country, Defense of Research Pamphlet VI, 1909.

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Furthermore, the reduction of the disease and mortality has corresponded directly to the thoroughness with which the populations have been vaccinated and revaccinated. Germany, for example, has had no epidemic of small-pox since the compulsory vaccination law went into effect thirty-eight years ago, whereas in Persia and Asiatic Russia, where vaccination is neglected, small-pox is still a death-dealing scourge.[16] The claim that the disappearance of the disease is due to a general betterment of sanitation is not supported by our recent experience in the Philippine Islands. The six provinces near Manila, with a population of about one million people, had a record of over 6,000 deaths from small-pox annually before 1907. In 1907, vaccination was completed in these provinces. Since that year, in the six provinces, not one person who had been successfully vaccinated has died of small-pox and only a few cases have occurred among all classes.[17] Inasmuch as animals are used in securing the virus, these triumphs of preventive measures against the disease must be attributed to operations on animals.

Through the application of antirabic virus, death from hydrophobia—a hideous death—has fallen from between 6 and 14 per cent. of persons bitten by rabid animals to a fraction of 1 per cent.; more than 400 persons were bitten by mad dogs and treated by the virus in Paris in 1910, and there was not a single death. Any one who has read the life of Pasteur knows the dramatic story of his experiments on rabbits and his thrilling success in the very first human patients whom he treated. The conquest of rabies must be regarded as one of the greatest services rendered by animals to their fellow-beings.[18]

Another victory in the campaign to reduce illness and mortality has been won in the fight against mosquito-borne infections. Yellow fever and malignant malaria contributed more than any other one cause to the failure of the French to build the Panama Canal. The present remarkable freedom from these diseases at the canal, which is permitting the triumphal completion of that stupendous work, is highest testimony to the efficacy of preventive medicine when well-known methods of control can be thoroughly enforced.[19]

Of the volunteer regiments mobilized during the Spanish-American War, 90 per cent. became infected with typhoid within the first eight weeks after mobilization. In the entire army nearly 21,000 men were disabled by this disease and more than 1,600 died of it. Last year 12,800 men of the American army were mobilized at San Antonio, Tex., for several months. Only *one* case of typhoid fever, that of a hospital attendant not yet immunized, appeared in the entire force. That this extraordinary phenomenon was due to protective inoculation against typhoid infection, which each soldier received before going into encampment, is indicated by the prevalence of typhoid in San Antonio during the period. The experience of the British army in India has been similar.

The entire modern process of protective inoculation is a direct outgrowth of artificial immunity previously demonstrated in animals (Richardson[13]). And the sole hope of rendering wide areas of tropical country fit for civilized society rests on the possibility of eradicating native diseases through the well-tested and efficacious methods of preventive medicine.

16. Schamberg: Vaccination and Its Relation to Animal Experimentation, Defense of Research Pamphlet I, 1911.
17. Heiser: Public Health Reports, 1911, p. 277.
18. Frothingham: The History, Prevalence and Prevention of Rabies and Its Relation to Animal Experimentation, Defense of Research Pamphlet VII, 1910.
19. Marshall: Animal Experimentation in Relation to Protozoan Tropical Diseases, Defense of Research Pamphlet XI, 1910.

ANTIVIVISECTIONISTS AND THEIR METHODS

Such, then, are some of the benefits to man and to lower animals of the experimental method applied to medical problems. In spite of these benefits, however, strong hostility to this method of studying disease is felt by certain persons who call themselves "antivivisectionists." These persons have no direct acquaintance with the conditions of experimentation; many of them scorn the evidence that any advantage to man has come from studies on animals; to support their contentions they send broadcast pamphlets in which are printed hostile opinions of medical men who are long since dead, men who had no conception of the merciful procedures of modern experimentation and its life-giving results; or they quote the testimony of spurious experts whose reputations were made in literature, art or theology, and not in the service of healing. However well-meaning there motives may be, their literature for years has been characterized by fraud and trickery and evil insinuation which have been repeatedly pointed out, but with no effect.[20] These methods of American antivivisectionists duplicate those of the English. The Royal Commission, which has just reported after five years of study and consideration, has declared of the antivivisectionists, their "harrowing descriptions and illustrations of operations inflicted on animals, which are freely circulated by post, advertisement or otherwise, are in many cases calculated to mislead the public." Both in this country and abroad, therefore, the active antivivisectionists have sought, through garbled statements, false evidence and inaccurate description, to cast such discredit on medical research as to give the impression that pain and premature death cannot be escaped through application of the experimental method.

THE ETHICAL QUESTION

Even when these reactionaries grant somewhat grudgingly that the distress of living creatures has been diminished by animal experimentation, they contend that the method of securing this result was immoral and is therefore unjustifiable. What renders the experimental use of animals immoral is difficult to understand when we consider other uses to which they are put. We force the harnessed horse to work, and in time of crisis, we drive him with lash and spur. We rob the mother cow of her calf, and than appropriate her milk. We permit the dehorning of cattle and their branding with hot irons. We do not object to the most shocking barn-yard operations, performed (without the sniff of an anesthetic) merely to make more palatable the flesh we eat. We slaughter ruthlessly, for sport, myriads of birds and beasts. Myriads more we slaughter for their furs and feathers. We kill for food every year in this country more than 50,000,000 beeves, sheep and hogs, and also 250,000,000 chickens, turkeys, ducks and geese. In nineteen of the largest cities in the United States more than 350,000 dogs and cats are destroyed annually, merely to clear the streets. Vermin and wild animals we subject to death in uncertain traps or end their existence with distressing poisons. If all injury and destruction of animal life is immoral, why select as an object for attack the treatment of the relatively few animals

20. Cannon: Characteristics of Antivivisection Literature, Defense of Research Pamphlet XIX, 1911.

employed in the laboratories with the object of reducing pain and suffering in the world?

Surely the life of lower animals is not so sacred that we cannot utilize it for our own betterment. Society protects itself from harm by holding in quarantine dangerous human beings, or by incarcerating them, or even by killing them. If attacked by a foreign foe, society does not hesitate to send into battle its young men, chosen for their strength, to suffer grievous wounds and death for the social welfare. Such necessary sacrifices of our fellow men are among the tragedies of social existence. The sacrifices of animals, in various ways so essential to the continuance of the human race, may be regarded as among the tragedies of their existence. But of all these, what sacrifices could be more thoroughly justified morally than those of experimentation, which have contributed so greatly to the reduction of suffering and to prolongation of life, both for men and the animals themselves?[21]

PRECAUTIONS AGAINST PAIN

I do not wish to give the impression that any one engaged in animal experimentation would, under any circumstances, justify the infliction of needless pain. That animals are in fact used humanely for the purposes of medical research has been again and again maintained and demonstrated whenever the question has been carefully examined. The English laboratory inspectors and the English Royal Commission are unanimous in testifying to the absence of cruelty in experimental procedures. In this country practically all institutions in which animals are used for medical and biologic research have adopted, by public and corporate action, regulations which place control of experimentation with the laboratory director. These regulations provide for the bodily comfort and the sanitary surroundings of the animals, and require all operations to be sanctioned by the director, who is held responsible for the importance of the problems studied and the propriety of the laboratory procedures. Furthermore, the regulations require all operations likely to cause greater discomfort than anesthetization itself to be done under anesthesia, and to be followed by painless death. Only the director can make exceptions to these last provisions, and he can do so only in the rare cases in which anesthesia or death of the animal would defeat the object of the experiments.[22]

The laboratory director, of all men, is most likely to know what is being done by those about him; more than any one else he is responsible to his institution, to the public interests and to his professional ideal; and his position is a warrant of his trustworthiness. To the laboratory director, therefore, the medical profession looks for the exercise of that enlightened compassion which lies at the heart of all medical service.

OBJECTIONS TO PROPOSED LEGISLATION

In spite of accumulated evidence that animal experimentation is conducted in a humane manner in this country, and that strict precautions have been taken against infliction of unnecessary pain, every year in one state or another a "mild" restrictive bill is alluringly presented by the antivivisectionists. Its ostensible purpose is, not to prevent "legitimate vivisection" by responsible investigators, but to stop the practice among the unskilled—for example, the medical student in his room. Examination of the bill reveals, however, that no provision is made for spying on the medical student in his room, but that every arrangement is made for inspection of the responsible investigators. To many persons inspection seems reasonable; they approve of going at least so far with the petitioners for legislation. The medical profession, however, has in the main offered objections to the proposed inspection.[23]

These objections are based to some extent on the attitude of the antivivisectionists toward inspection as it has been carried on in England during the past thirty-six years. During all this period no noteworthy abuse of animal experimentation has been revealed by the inspectors. The inference drawn by the antivivisectionists is that occasional inspection is futile; indeed, they declare that, unless an inspector is in the laboratories continuously during all operations, horrible abuse of animals is sure to occur.[24] The impossibility of providing for such constant oversight would suggest to a person of common sense that a reasonable reliance be placed on the good will and natural humanity of those engaged in research. The agitators in this country, however, have argued that when danger of wrong exists, as in the conduct of a bank, for example, inspection is provided, and therefore laboratory inspection should be provided. An important defect in this argument rests in its application. For the inspection of banks experts in banking are appointed, but for the inspection of laboratories experts in experimentation are definitely excluded in the proposed legislation. For this important work the antivivisectionists desire only their own representatives. In the opinion of the experimenters such persons, untrained in observing and judging animal reactions, and lacking any insight whatever into the extraordinary complexities of medical investigation, are thoroughly incompetent. Indeed the most charitable interpretation to be placed on the ridiculously false and misleading statements continually made by these persons is that they are profoundly ignorant of processes which the laboratory workers have spent many years in learning—the most involved and entangled processes in nature, those occurring in highly organized animals.

Apart from objecting to inspection because it has not satisfied the antivivisectionists themselves, because it has not revealed abuses and because incompetent inspectors are insisted on, we may reasonably regard it as merely the first step in an effort to stop experimental medicine absolutely. In Great Britain, where legal restriction has gone farthest, there are no less than fifteen antivivisection societies urging that experiments on animals be abolished. In this country there are at least six such organizations whose aim likewise, expressed or implied, is abolition. The agitation for "mild" bills, for inspection or for slight restriction by these groups of agitators is, under the circumstances, properly regarded as merely the initial move toward total suppression of what has been demonstrated in these last sixty years as the most powerful instrument of medical progress that has been devised.

21. For further discussion, see Angell: The Ethics of Animal Experimentation, Defense of Research Pamphlet V, 1909.

22. Cannon: Medical Control of Vivisection, Defense of Research Pamphlet XVI, 1910.

23. It is, perhaps, unnecessary at this point to indicate the absurdity of the cry for the "open door." No one of insight and judgment is excluded from laboratories of medical research. In fact, in every laboratory with which I am acquainted the doors are freely open to biologists and persons with medical training. To be sure, not everybody is welcomed, but not everybody is welcomed to a hospital operation. The surgeon, operating in a home does not permit the "open door;" he even goes so far as to exclude close relatives of the patient. Yet he does not become thereby the object of malignant suspicion.

24. Minutes of Evidence, English Parliamentary Commission on Vivisection, 1905-6, Coleridge's testimony, *passim*.

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THE TWO PARTIES

The issue then is joined. On the one side are the antivivisectionists who insist that animals shall not be experimented on, even though mankind may thereby be saved throughout coming centuries from pain and premature death. On the other side are the investigators, successors of those who first applied to medical problems the experimental method, a method which, besides delivering into our hands the unlimited energies of the physical world, has in a few decades wrought marvelous advances in our ability to conserve human life. These men realize that numerous sources of distress are still unexplained. Measles, scarlet fever, infantile paralysis, fatal diseases of the kidneys and liver, cerebral degenerations, the awful scourge of cancer[25]—almost all progress in our knowledge of these afflictions has come from experiments on animals—but how much more remains to be accomplished! Men and women and children, whose suffering extends to every one bound to them by the strong ties of love and sympathy, daily go down to death because the disease is a mystery and its cure unknown. Who shall say that experimental medicine shall not continue to bring its blessings? In the eager search for more light, who shall decide the critical case involving pain to animals? The antivivisectionists maintain that they should decide; the physicians, on the contrary, urge that the decision remain in their control. The antivivisectionists, ignorant of the problems and methods of medical research, limit their humanity to the welfare of the laboratory animals. The physicians, perceiving that more power to fight disease can only come from more knowledge, trust the deeper humanity of the investigators who are seeking that knowledge. In the end society, which reaps the benefit of medical progress, must determine which of these contending parties shall prevail.

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HOOKWORM AMONG ORIENTAL IMMIGRANTS *

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The Immigration Act regulating the admission of aliens into the United States provides for a medical examination to be conducted by officers of the Public Health and Marine-Hospital Service. The purpose of this examination is twofold: First, to prevent the introduction into this country of contagious disease of a dangerous or loathsome character, and, second, to weed out the physical or mental incompetents who are likely to become public charges.

Recently attention was directed to the introduction of hookworm by aliens arriving at the port of San Francisco from the Orient. This infection has been classed among the dangerous contagious diseases whose admission is prohibited. A routine examination of the stools of the aliens passing through the immigration station on Angel Island was attempted. For many reasons it was neither possible nor advisable to examine all, but from Sept. 23, 1910, to Nov. 30, 1911, the stools of 2,255 aliens were examined microscopically for the ova of the hookworm. Of this number, 1,077 were found to contain the eggs of either the *Necator americanus* or the *Ankylostoma duodenale*.

While this examination was undertaken primarily to determine whether or not the alien harbored the hookworm, note was made of the presence of the ova of other intestinal parasites, and, after Nov. 28, 1910, a permanent record of the findings was kept. Prior to that date, unfortunately, the records were loosely kept and, in the confusion incident to alterations to the hospital building, were lost.

It was during the period from Sept. 23 to Nov. 28, 1910, that the greater number of Hindus were examined. Among these, 63 per cent. were found to be infected with hookworm. The number of Hindus rejected for this condition was so great as effectually to check the immigration of this class of Orientals, which was then assuming embarrassing proportions. None of the examinations made during this period is recorded in the tables submitted herewith. It may be stated, however, that, as a rule, the stools of the Hindus were remarkably free from the eggs of other animal parasites.

These Hindus were for the most part unskilled laborers from the Punjab, and wholly of the male sex. The absence of the common parasites from their intestines was in most striking contrast to the Chinese and Japanese examined. It is a question whether or not their rigid religious ritual concerning foodstuffs, their preparation, etc., offer a satisfactory explanation of the absence of the *Trichuris* and *Ascaris*. Thirty-five per cent. of the stools of Hindus were negative, i. e., no ova of any variety could be found.

The technic of the examination at this station has passed through many phases, and at the present time an electric centrifuge is used, as this enables the greatest amount of work to be done in the shortest length of time with the minimum amount of personal discomfort. An attendant, after making a solution of a small portion of the stool, centrifuges it, washing until the supernatant fluid is colorless, and then carries the tube to the laboratory for the microscopic examination. A smear is made of a portion of the sediment in distilled water and examined, without a cover-glass, through the 16 mm. objective, 5 × ocular. Owing to the necessity for a quick report, only one slide is examined. I believe, however, that the percentage missed is very small. Ova of both varieties of hookworm have been observed in the stools of Chinese and Japanese (not infrequently both being found in the one stool), but, so far, the Hindu has yielded only the *Ankylostoma*. Eggs of parasites other than those mentioned in the table have occasionally been encountered, but as the identification was somewhat uncertain, they have not been included.

It should, perhaps, be stated that in these tabulated statements the subjects of examination were not selected, but were taken without regard to any clinical evidence of the infection they might have presented.

During this time seventeen whites (eleven males and six females) were examined, fifteen from Mexico, one from Central America and one from Russia. Two, one male (15-30) and one female (14 years old), both from Mexico, were found to be infected with hookworm.

In drawing any conclusions from the above tables as to the relative prevalence of intestinal parasites among Orientals at various ages, it should be remembered that only the comparatively young emigrate. Especially is this so in the case of Chinese among whom the exclusion act limits the newcomers to the minor sons of Chinese

25. Ewing: Animal Experimentation and Cancer, Defense of Research Pamphlet IV. 1909.

* Read before the San Francisco County Medical Society, March 12, 1912.

IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE

NOS. OF JAPANESE FEMALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	0	52	5	0	57
Round- and whipworms	1	144	14	0	159
Whipworms	1	38	6	0	45
Round- and hookworms	2	118	10	0	130
Whip- and hookworms	0	34	4	0	38
Round-, whip- and hookworms	2	154	14	1	171
Round-, thread- and hookworms	0	1	0	0	1
Round, whip-, thread- and hookworms	0	1	1	0	2
Whip-, thread- and hookworms	0	1	0	0	1
Hookworms alone	1	51	6	0	58
Negative	1	40	4	0	45
Totals	8	634	64	1	707

NOS. OF JAPANESE MALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	0	5	5	0	10
Round- and whipworms	2	6	5	1	14
Whipworms	0	3	4	0	7
Round- and hookworms	0	12	9	0	21
Whip- and hookworms	0	0	2	0	2
Round-, whip- and hookworms	3	11	1	1	16
Hookworms alone	0	9	2	0	11
Negative	2	5	2	0	9
Totals	7	51	30	2	90

NOS. OF CHINESE MALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	3	48	106	17	174
Round- and thread worms	0	1	0	0	1
Round- and whipworms	32	171	60	12	275
Whipworms	1	23	12	1	37
Round- and hookworms	10	52	25	1	88
Whip- and hookworms	6	17	2	0	25
Round-, whip- and hookworms	45	182	21	3	251
Hookworms alone	0	19	6	1	26
Negative	1	35	75	14	125
Totals	98	548	307	49	1,002

NOS. OF CHINESE FEMALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	2	2	0	0	4
Round- and whipworms	0	9	0	0	9
Whipworms	1	1	1	0	3
Round-, whip- and hookworms	0	5	0	0	5
Hookworms alone	0	0	1	0	1
Negative	0	6	2	0	8
Totals	3	23	4	0	30

NOS. OF HINDU MALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	0	4	1	0	5
Round- and whipworms	2	2	0	0	4
Whipworms	0	1	0	0	1
Round- and hookworms	1	4	0	0	5
Whip- and hookworms	0	1	0	0	1
Round-, whip- and hookworms	0	0	1	0	1
Round, whip-, thread- and hookworms	0	1	0	0	1
Thread- and hookworms	0	1	0	0	1
Hookworms alone	2	15	3	0	20
Negative	0	7	0	0	7
Totals	5	36	5	0	46

IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE —Continued

NOS. OF HINDU FEMALES BY AGE PERIODS

Parasites	0–14	15–30	31–50	51	Total
Roundworms	0	1	0	0	1
Hookworms	1	2	0	1	4
Negative	0	1	0	0	1
Totals	1	4	0	1	6

The incidence of hookworm infection among the Orientals may be conveniently grouped thus:

JAPANESE FEMALES

Age Periods	No. Infected	No. Examined	Per Cent.
0-14	5	8	62.5
15-30	360	634	56.7
31-50	35	64	54.6
51 plus	1	1	100.0
Totals	401	707	56.7

JAPANESE MALES

Age Periods	No. Infected	No. Examined	Per Cent.
0-14	3	7	42.8
15-30	32	51	62.7
31-50	14	30	46.6
51 plus	1	2	50.0
Totals	50	90	55.5

CHINESE MALES

Age Periods	No. Infected	No. Examined	Per Cent.
0-14	61	98	62.2
15-30	270	548	49.2
31-50	54	307	17.5
51 plus	5	49	10.2
Totals	390	1,002	38.9

CHINESE FEMALES

Age Periods	No. Infected	No. Examined	Per Cent.
0-14	.	3	....
15-30	5	23	21.7
31-50	1	4	25.0
51 plus	.	..	....
Totals	6	30	20.0

HINDU MALES (Subsequent to Nov. 28, 1910)

Age Periods	No. Infected	No. Examined	Per Cent.
0-14	3	5	60.0
15-30	22	36	61.0
31-50	4	5	80.0
51 plus	..	..	....
Totals	29	46	63 plus

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IMMIGRANTS GROUPED ACCORDING TO RACE, SEX AND AGE —Continued

HINDU FEMALES (Subsequent to Nov. 28, 1910)

Age Periods	No. Infected	No. Examined	Per Cent.
0-14.....	1	1	100.00
15-30.....	2	4	50.00
31-50.....			.....
51 plus....	1	1	100.00
Totals..	4	6	66.66

already in the United States or to students, merchants, tourists, etc. The greater number of the Chinese men between the ages of 31 and 50 are returning aliens, i. e., they have been in the United States for years prior to a visit to China, while practically all of those of 51 years or more are of this class.

The greater prevalence of hookworm among Japanese women as compared with Chinese will be noted, but here the social condition must be taken into consideration before making any sweeping deductions. The Japanese women are, for the most part, country girls who have been working barefooted in the fields, while the Chinese women are the wives or daughters of merchants and mostly house women.

When one considers; however, the conditions under which the great majority of the Japanese women, figured above, come to the United States, one is induced to conclude that hookworm infection is more prevalent than this examination would indicate, at least in the districts mostly involved, viz., the kens or countries of Fukuoka, Kumamoto, Hiroshima and Tottori. These women have been more or less carefully selected on the ground of health and looks, since they come to the United States to become the wives of Japanese men now resident in this country. They are what is locally known as "picture brides," the marriage having been recorded in Japan by photographs of the contracting parties.

The conclusion that hookworm is very prevalent in Japan, or at least in some sections thereof, is further borne out by the fact that the immigration of the Japanese male coolie is practically *nil* at this time, and the Japanese males figured in the tables are either returning aliens or merchants, students, etc. Occasion was taken to examine the stools of fifty-two Japanese coolies who were *en route* from Japan to Tahiti in the South Seas and who were held on the station pending transshipment. Of these, forty-eight (92.3 per cent.) were found to harbor uncinarias in their intestinal tracts. As they were not entering the United States, they are not included in the tables above.

While there seems at first glance to be little or no clinical evidence of hookworm infection in the majority of these cases, experience soon leads one to recognize the slight differences, and even our attendants after a short time are able to pick the infected from the non-infected. There is a certain amount of anemia, which I believe to be most noticeable in the lips, a peculiar muddy complexion, often with a listless facies, and a lusterless appearance of the hair characterizing the hookworm infected at this port. Hemic murmurs are rather common. So far as subjective symptoms go, we have learned nothing at the immigration station. It is useless to ask an alien if he has any symptoms of a disease. He is invariably in perfect health according to his own statements, or if he should be so unfortunate as to possess some outward visible evidence of disease he either had it "since little boy" or "ketch him aboard ship just before come here." It is very seldom that one sees here what Ashford classes as severe cases. Such a patient would very likely be refused passage by the ship's doctor on general principles. We do, however, see many cases in which puberty has apparently been delayed through hookworm infection. The recognition of the influence of hookworm in retarding growth and development has cleared up what has frequently puzzled the officials administering the Chinese exclusion act, viz., the apparent discrepancy between the age claimed by a minor son of a Chinese merchant and the appearance of the applicant himself. Heretofore, when a Chinaman applied for the admission of his 18-year-old son and presented a small undersized lad of apparently 12 or 15 years of age, it was regarded as a slip in the technic of an endeavor to evade the Chinese exclusion act, and what was really an evidence of good faith worked to his detriment.

Before concluding, I cannot forbear to call attention to the important influence that Oriental immigration may have on the medical history of our country. It is not only hookworm and other intestinal parasites, but many other tropical diseases that may be imported into southwestern United States. Filariasis, amebiasis and malarial infections have been found among Orientals applying at San Francisco for admission. It would be well for practitioners in these localities to bear such diseases in mind, for it is impossible to reject all who arrive here so afflicted. Under our laws domiciled aliens returning from a visit to the Orient, native-born Chinese and foreign-born sons of natives cannot be denied entrance. In fact, the two latter classes are exempt from the medical examination as would be any other citizen of the United States or his children born abroad. The experiences of a year teach that the most we can hope to accomplish is to limit the amount of infection introduced and to draw the attention of local health officers and practitioners to existing conditions in the hope that gradually these diseases may be recognized and kept under control.

While this subject is in itself of more or less interest, in its relation to the public health and economy of the state it becomes of considerable importance, at least to the Pacific coast and adjoining southwestern states. It is in this region that the greater portion of the incoming Orientals settle. At present this region is more or less sparsely inhabited, but it is expected that, as its natural advantages become better known and transportation facilities improve, its population will greatly increase. With the Oriental agriculturist, pursuing his patriarchal methods of fertilization of the soil with human excreta and with his careless personal habits, it becomes only a question of time until foci of hookworm and other infections are established at every settlement of those races in this region.

It is possible that valuable information concerning the source and spread of endemic uncinariasis might be obtained by a study of these localities at this time. We have here in the districts taken up by Orientals in a comparatively sparsely settled country a condition somewhat approaching the eastern-southern United States in its early days, with the difference, however, that in the east the original hookworm-bearer, the negro, was more or less confined to one locality, while here in the west, migrating bodies of Orientals move from one place to another as labor opportunities offer, thus spreading

their infection over a wider area. Now while the foci of infection are comparatively limited, the task of hookworm elimination and prophylaxis is easy compared to what it will be in the succeeding generations if nothing along these lines is now attempted.

THE RELATION BETWEEN A CHICKEN SARCOMA'S BEHAVIOR AND THE GROWTH'S FILTERABLE CAUSE *

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In several previous papers from this laboratory the behavior of a chicken sarcoma transmitted by a filterable agent has been described.[1] Emphasis has been laid on the growth's typically neoplastic character, and on the lack of phenomena suggesting the presence of an extrinsic causative agent. The importance of the subject in its possible bearing on the etiology of mammalian growths has led us to a further experimental study, here to be briefly reported.

An obvious point at which to attack the problem of the relationship between the avian growth and its cause is furnished by the process of metastasis formation. The histologic findings indicate more clearly than in the case of most tumors[2] the development of secondaries of the sarcoma from transported cells. But is this the usual method of the growth's dissemination? And, if so, are not at least some of the metastases due to a localization of the causative agent as such?

To test whether the sarcoma cells, as emboli, can proliferate and give rise to tumors has not been difficult. A suspension in Ringer's solution of particles of the fresh neoplastic tissue was injected intravenously into a number of susceptible, normal fowls, and at short intervals these fowls were killed and portions of the lungs examined in serial section. The mode of formation of the lung-tumors was in this way traced. It was found that they uniformly arose by a survival and growth of the injected tumor cells, with penetration of the vessel-wall and extension into the surrounding tissue. The histologic pictures strikingly illustrate the development of a tumor by the multiplication of cells already neoplastic.

The visceral metastases of the sarcoma, occurring in the ordinary course of the disease, appear first and most frequently in the lungs. This rule is subject to exception much more rarely than in the case of human tumors metastasizing by the blood-stream. In only five of 157 fowls with visceral metastases were the lungs free of sarcoma and the further organs affected. In these cases, unfortunately, a patent foramen ovale was not looked for; but in two similar ones occurring since these statistics were compiled, the abnormality was present. Forty-one of the 157 fowls had metastases in the lungs alone; in 111 the lungs and other viscera were affected, often with very numerous secondary growths. In connection with the foregoing experiments, such a distribution is strong evidence for a general origin of the metastases from cell-emboli, which latter, as usual, are sieved out of the circulation by the pulmonary capillaries. There is, however, the alternate possibility that the extrinsic agent, as such, engenders tumors more easily in the lungs than in other organs. That this is not the case is shown by the results of direct intravenous injection of a Berkefeld filtrate containing the causative agent. In only two of eleven fowls developing a growth after such treatment was the sarcoma primary in the lungs, despite the fact that the agent was carried in bulk directly to these organs. In seven of the cases diatomaceous earth had been added to the filtrate and had lodged for the most part in the pulmonary capillaries, there producing injury such as has been found to favor the agent's action.[3]

Although it is thus certain that the chicken sarcoma's metastases are in general referable to a development of cell emboli, there remains the question whether secondary tumors may not be caused occasionally by the filterable agent as such. That the agent can enter the circulation is demonstrated by the appearance in some instances of a sarcoma after the injection into susceptible hosts of large quantities of centrifugated, "paraffin" plasma from fowls moribund with the metastasizing growth. The general importance of injury in determining the agent's action led us to attempt to obtain by its means secondary tumors under conditions which would show them to be independent in origin of transported cells.

Tissue derangements in tumor-bearing fowls were produced by the injection of scarlet red, or diatomaceous earth, or by incisions allowed to heal by secondary intention. The numerous experiments have given results almost entirely negative. Usually the sarcoma failed to localize at the seat of injury. A single case suggests the direct action of the extrinsic agent. In a chicken with a very large primary sarcoma, but no discoverable metastases in the viscera, a small secondary growth was found post mortem at the site of injection of diatomaceous earth. The heart was not examined for a foramen ovale. Two other instances of localization at the point of injury are less significant because of the presence of many metastases in the lungs and elsewhere. A third and similar case has come to attention during the routine autopsies on several hundred tumor-bearing fowls. The chicken had a large primary growth at the site of inoculation in the pectoral muscles, many metastases in the lungs but none in any other organ except the oviduct, in which were two small nodules. The oviduct contained an inspissated egg, and its walls showed reactive thickening and increased vascularization. Whether in any or all of these cases there was an action of the extrinsic agent, as such, cannot be said. When metastases develop at sites of injury in human beings the morphology of the growths often shows their origin from transported cells; but this feature is of no assistance with a spindle-celled sarcoma, such as ours, which might be primary anywhere.

The subsidiary part taken by the causative agent in the sarcoma's dissemination, if indeed it takes any direct part at all, is in keeping with what is already known of the tumor's growth and general behavior.[1] Yet in the end the sarcoma must be closely dependent on the activity of its filterable cause, for when this latter has been attenuated by a long stay in glycerin the tumors resulting from its inoculation develop slowly and frequently retrogress.

The conditions which determine the curious relationship between the disease and its cause are of much interest. How does it happen that the sarcoma, though ultimately dependent on an extrinsic agent, is dominated

* From the Laboratories of the Rockefeller Institute for Medical Research.

1. For the literature see an article by the authors, THE JOURNAL A. M. A., June 1, 1912, p. 1682.

2. Rous, Peyton: Jour. Exper. Med., 1911, xiii, 397.

3. THE JOURNAL A. M. A., June 8, 1912, p. 1751.

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in its behavior by the cells composing it? Some simple reasons suggest themselves. In the first place, the agent's action to produce a neoplastic change takes place with extreme slowness as compared with the proliferation of the cells, once they have become neoplastic. Consequently the growth of the neoplasm appears to take place entirely by multiplication of the cells of an initial focus. Growth doubtless does take place wholly in this way in many cases because of a second peculiarity of the agent, namely, its dependence on a special set of conditions in order that it may produce a neoplastic change.[3] The necessity for such conditions goes far to explain the agent's failure to take an active part in the tumor's dissemination in the body, granting indeed that the agent is present in the circulation before the fowl is moribund. The possibility of immune processes effective against the agent when separate from the cells must be kept in mind. The immune processes thus far recognized have been directed against the cells themselves, as in the case of the mammalian tumors.

The relationship existing between the chicken sarcoma and its cause, as shown by previous papers and by the findings here presented, seems to us to furnish some basis for the conception of an extrinsic cause for other sarcomata.

Sixty-Sixth Street and Avenue A.

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BLOOD CULTURES IN PNEUMONIA *

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That there is a bacteriemia in many cases of pneumonia at some time during the course of the disease is now a well-established fact. Just how frequent this condition is, and whether it is actually present in every case are questions which have not been satisfactorily answered. Various observers have published, from time to time, reports of cases with widely varying results. It is possible that these discrepancies may be traced to differences in the technic employed, to the particular time in the course of the disease at which the cultures were taken, or to seasonal or geographic conditions affecting the severity of the disease, dependent, perhaps, on the virulence of the organism.

Rosenow,[1] in this country, and Prochaska,[2] Silvestrini and Sertoli,[3] abroad, report the highest percentage of positive results. Rosenow, in a series of 145 cases, recovered an organism in 132, or 91 per cent. He used, principally, broth in flasks, in which the proportion of blood present represented a dilution of 1 in 50 or 1 in 75. Prochaska, in two series of thirty and ten cases, respectively, reports finding the organism in 100 per cent. This author used both broth and agar, but obtained by far the more satisfactory results with the liquid medium, and points out the advantage of using a high dilution. Silvestrini and Sertoli obtained positive results in fifteen out of sixteen cases, almost all of which ended fatally.

On the other hand, there are numerous other observers whose percentage of positive cultures has been much lower. Sittman[4] reports six positive out of sixteen cases, Kuhnau[5] one out of nine, White[6] three out of nineteen. Schottmüller,[7] in a series of 209 cases, found an organism in the circulating blood in only 23 per cent. He used, for the most part, cultures on solid media making several plates representing varying dilutions of blood. Cole,[8] in 1902, out of thirty cases reported only 30 per cent. positive cultures, using broth and milk. Strouse and Clough,[9] in one of the most recent papers, obtained positive results in 56 per cent. of cases in a series of twenty-five.

With reference to the recovery of the pneumococcus from the blood at the time of crisis, of lysis or after, results have been more uniform, the majority of authors failing to obtain growth at this time. Rosenow notes positive results after crisis in a few cases, usually when taken a few hours after the onset, although he was successful in recovering the organism as late as six days following crisis in a case of apparently delayed resolution. Wolf[10] reports similar results, obtaining positive cultures after crisis or lysis in six out of fifteen cases. In three of his cases there was delayed resolution, but in the other three there were no clinical complications.

The present series consists of the cases coming under my observation during the season 1911-1912 in the routine bacteriologic work at the Long Island College Hospital. Only those cases which at the time of culture or subsequently could be definitely diagnosed clinically as pneumonia are included in this report. Cases were unilateral lobar pneumonia unless otherwise noted.

TECHNIC

The patient's arm was cleansed, and disinfected at the elbow as follows: The surface was shaved, scrubbed with green soap and sterile water, followed by bichlorid of mercury, alcohol and ether. Preparation was done, preferably, at least an hour before the time for taking the culture and the arm wrapped with a sterile bichlorid compress in the meantime. A Bier's bandage was wound around the arm above the elbow, sufficiently tight to produce a moderate venous stasis, and a small cut made through the skin directly over and parallel with the median cephalic or basilic vein. In making the incision the skin was drawn to one side to avoid the possibility of cutting into the vein. A Luer all-glass syringe of 15 c.c. capacity was used and a Number 18 or 19 needle. The needle was plunged into the vein in the direction of the blood-current. Ten c.c. or more of blood were withdrawn and immediately transferred to a tube containing an equal volume of Epstein's[11] ammonium oxalate solution and shaken to prevent clotting. This was taken to the laboratory and the mixture of blood and oxalate planted in suitable media for observation.

MEDIA

All media used, whether solid or liquid, were neutral to phenolphthalein, which, apparently is the

* From the Department of Bacteriology, Hoagland Laboratory.

1. Rosenow: Studies in Pneumonia and Pneumococcus Infections, Jour. Infect. Dis., 1904, i, 280.
2. Prochaska: Bacteriologische Blutuntersuchungen bei Pneumonien, Zentralbl. f. inn. Med., 1900, xxi, 1145.
3. Silvestrini and Sertoli: Sulla presenza del diplococco di Fraenkel nel sangue circolante degli pneumonici, Riforma Med., 1899, ii, 483.
4. Sittman: Bacterioskopische Blutuntersuchungen, Deutsch Arch. f. klin. Med., 1894, liii, 323.
5. Kuhnau: Ueber die Resultate und die Leistungsfähigkeit der bacteriologischen Blutuntersuchung im Dienste der klinischen Diagnostik, Ztschr. f. Hyg. u. Infektionskrankh., 1897, xxv, 492.
6. White: Blood Cultures in Septicemia and Other Diseases, Jour. Exper. Med., 1899, iv, 26.
7. Schottmüller: Zur Aetiologie der Pneumonia crouposa, München. med. Wchnschr., 1905, lii, 1425.
8. Cole: Blood Cultures in Pneumonia, Bull. Johns Hopkins Hosp., 1902, xiii, 135, 136.
9. Strouse and Clough: Blood Cultures in Pneumonia, Bull. Johns Hopkins Hosp., 1910, xxi, 233, 235.
10. Wolf: Latent Pneumococcemia, Jour. Infect. Dis., 1906, iii, 446. For more complete bibliography see Rosenow, Wolf and Strouse and Clough.
11. Epstein: Hiss and Zinsser's Text-Book of Bacteriology, p. 178.

optimum reaction for the growth of pneumococci and streptococci. All liquid media contained a small piece of calcium carbonate (as recommended by Hiss[12]) in order to neutralize any free acid formed and thus prevent any acid inhibition of growth. For plating, plain and 1 per cent. dextrose agar were used and plain ascitic, dextrose ascitic and dextrose broth without the addition of any enriching fluid were used for flask cultures. The flasks contained from 150 to 200 c.c. of broth and therefore represented a dilution of the blood of from 1 in 20 to 1 in 50, according to the amount of blood used. The medium which gave the best results was the dextrose-calcium-carbonate broth without the addition of any enriching fluid. Apparently the amount of blood added furnishes enough enrichment to allow the pneumococcus to grow abundantly without exerting any inhibiting effect. The advantage in the use of liquid media over the plate method was marked. In almost every case in which the broth cultures were positive the plates failed to show any growth. This occurred in several cases in which a profuse growth was obtained in broth in from twelve to twenty-four hours. The most reasonable explanation seems to be that the higher dilution present in the broth culture allows better diffusion and consequent dilution of the bactericidal or other inhibiting substances present in the blood.

TABLE SHOWING RESULTS OBTAINED IN A SERIES OF 45 CULTURES MADE FROM THE BLOOD OF 42 PATIENTS SUFFERING FROM PNEUMONIA *

Culture No.	Day of Disease	Result of Culture	Recovery	Inulin	Bile	Remarks
1	†12	0	+	..	..	
2	†12	0	+	..	..	Double pneumonia, less than twenty-four hours before lysis.
3	3	+	0	..	..	
4	†7	0	+	..	..	
5	5	0	+	..	..	Culture taken after crisis had begun; double pneumonia.
6	6	0	+	..	..	
7	†7	0	+	..	..	After beginning of crisis.
8	†4	0	+	..	..	very mild case.
9	?	0	+	..	..	After beginning of crisis; second culture, eighteen hours later, also negative.
10	4	0	+	..	..	After beginning of crisis.
11	5	+	0	..	..	100 colonies per c.c. of blood; ½ c.c. of 24-hour culture killed mouse in 18 hrs.
12	†2	0	+	..	..	
13	†3	0	+	..	..	Case 12 at crisis.
14	†7	0	+	..	..	Very mild.
15	6	+	+	..	..	Crisis four days after culture.
16	2	+	0	+	..	Culture five days before death; typhoid suspected; patient delirious.
17	7	0	+	..	..	After crisis had begun, very mild case.
18	?	0	+	..	..	Twenty-four hours before crisis.
19	5	0	+	..	..	At time of crisis.
20	5	+	+	0	0	Streptococcus; clouding of ascitic-dextrose agar; 2 c.c. failed to kill rabbit; suspected tuberculosis.
21	5	0	+	..	..	Mild case, central.
22	10	+	+	+	+	Typhoid suspected; long chains in original culture, subsequently lost (2 c.c. killed rabbit in 18 hours; encapsulated diplococci at autopsy).
23	4	0	+	..	..	Twenty-four hours before crisis, mild case.
24	?	0	+	..	..	After crisis had begun.
25	10	0	+	..	..	During crisis.
26	5	0	+	..	..	Just previous to beginning of crisis.
27	5	0	+	..	..	At time of crisis.
28	3	+	+	+	+	
29	5	+	+	+	..	
30	5	0	0	..	..	Delirium tremens.
31	5	0	0	..	..	Subsequent culture positive.
32	†3½	0	0	..	..	Case 32. Patient seven months pregnant.
33	3	+	0	+	+	Complicated by pregnancy; patient had
34	8	+	0	+	+	apparent crisis but developed pneumonia of other lung.
35	3	+	+	0	0	Clouding in dextrose-ascitic-agar.
36	10	+	0	0	0	Clouding in dextrose-ascitic-agar; hemolysis marked.
37	3	+	0	+	+	Patient developed delirium tremens.
38	1	+	0	+	+	Patient developed delirium tremens.
39	4	0	+	..	..	
40	5	+	0	+	+	
41	3	0	+	..	..	
42	10	+	+	+	+	Subsequent culture.
43	?	+	0	+	+	Died after apparent crisis; delirium tremens.
44	5	0	+	..	..	Case 41. Two days before lysis set in.
45	4	0	+	..	..	Slight involvement upper lobe.

* Number of cases, 42; positive, 17; percentage of positive cases, 40.5 per cent.; number of cultures taken during crisis or lysis, 10; deducting cultures taken during crisis or lysis, percentage of positive cultures, 53 per cent.; total death-rate, 26.2 per cent.; death-rate in positive cases, 53 per cent.; in negative cases, 8 per cent.
† Eighteen hours.

Ordinarily, growth was apparent within twenty-four hours, as indicated by a clouding of the medium and a change in the color of the blood. This varied from a slight discoloration to a brownish-black. Hanging-drop and stained preparations were made in order to observe morphology, and subcultures made on hydrocele-agar and calcium-carbonate-hydrocele broth to facilitate study of the colonies and chain-formation. The organisms obtained were then identified by means of the inulin, bile and hemolytic tests. A few strains were tested for virulence by inoculation into rabbits. The appearance of the growth in dextrose-hydrocele-agar was also instructive when there was the possibility that the organism in question might be a streptococcus. The streptococci invariably produce a distinct clouding of this medium, whereas no change is noticed in the case of the pneumococci.

The accompanying table shows the results obtained in the series of forty-five cultures.

Although it is not to be expected that any definite conclusions can be drawn from the above table, representing, as it does, such a small number of cases, yet some points may be emphasized. It is apparent that we are not dealing with a series in which the total death-rate is high, as compared with some of those reported. Of the seventeen positive cases, one-half of that number of patients died, so that it would appear that the finding of organisms in the blood is not absolute as far as its prognostic value is concerned. The fact that of the negative cases only three patients died might seem to indicate that positive findings bear some relation to the severity of the disease. In ten cultures taken at the time of or during crisis or lysis, uniformly negative results were obtained; in no case was any organism recovered from the blood. Just what the relation is between crisis and the disappearance of the organism from the blood, whether it is dependent on the accumulation of antibacterial substances which influence the viability of the organism when transferred to artificial media, or on other factors, the mechanism of which we do not fully understand at present, cannot be definitely stated.

In cases in which positive results were obtained it is hard to see wherein the time at which the culture was taken, in relation to the progress of the disease, had any influence. In one case in which the exact time and nature of the chill could be observed, owing to the fact that the patient developed the disease while in the hospital, the culture taken eighteen hours after the initial chill remained sterile, whereas one taken two days later showed an abundant growth of pneumococci. It is to be regretted that more subsequent cultures were not taken. The above is the only one in which a second culture was positive where the first was sterile. The three other cases in which a subsequent culture was taken gave negative results each time.

12. Hiss: Hiss and Zinsser's Text-Book of Bacteriology, p. 120.

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It is of interest to note that in three cases organisms were isolated which, by all differential tests, would be classed as streptococci. None of these organisms fermented inulin or were dissolved by bile. All produced a clouding in dextrose-ascitic agar. Two were nonpathogenic for rabbits in doses of 2 c.c. of a twenty-four-hour broth culture, a dose which is invariably fatal with pneumococci.

As to the value of blood cultures as an aid to diagnosis, the field appears to be rather limited. As a rule, the clinical symptoms are sufficient to warrant a positive diagnosis. In three cases of the above series, the blood culture was of distinct advantage in the differential diagnosis, in two suspected cases of typhoid fever, and in one of suspected miliary tuberculosis.

SUMMARY

The points which seem to be of greatest interest, are:

1. In this series, characterized by a low total death-rate, blood cultures were positive in only 40 per cent.

2. The total number of cases was forty-two, of which seventeen, or 40.5 per cent., were positive, and twenty-five, or 59.5 per cent., were negative. The total mortality was eleven, or 26.19 per cent.; five patients who died were alcoholics. The positive cases showed a mortality of eight, 53.5 per cent., among which were four alcoholics. The negative cases showed a mortality of three, 8 per cent.; one patient who died was an alcoholic. On account of the incidence of alcoholism, it is difficult to draw any definite conclusions as to the relation between positive findings and prognosis.

3. All cases at the time of, or after, crisis or lysis gave uniformly negative results.

4. Calcium-carbonate broth seems to furnish a most suitable medium for the growth of pneumococci and streptococci and possesses an additional advantage over solid mediums of securing a sufficiently high dilution of the blood.

5. In three cases organisms which are to be classed as streptococci were obtained in pure culture. These did not show any of the characteristics of *Streptococcus mucosus capsulatus*.

I desire to express my sincere thanks and appreciation for the hearty cooperation shown by the visiting and house staffs at the Long Island College Hospital.

AN ESSAY OF HEALTH AND LONG LIFE, PUBLISHED A. D. 1725 *

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The science of medicine may be considered as just passing from infancy into childhood. The art of medicine is a trifle older. The fond relatives of the former young gentleman, who is only beginning to feel steady on his legs, are already disposed to look condescendingly down on the other youth, who had his birthday back in those dark ages before the dawn of human civilization, and has been growing very slowly, but very steadily, ever since. The study of history develops a sense of perspective, which in its turn encourages tolerance, breadth of view and hope of future growth. In such a society as this it would surely be both interesting and profitable if we could now and then turn aside from regarding the deeds of the present and give a little time to the study of those of the past.

The leading physicians of the seventeenth and eighteenth centuries devoted a good deal of energy to an attempt to construct complete theoretical systems on which to base all their understanding and treatment of the human body and its ailments. In the light of the modern accumulation of accurate scientific observations, these dead systems often furnish much amusement to those who read them; and their foundations and conclusions are often equally ludicrous. Fortunately there were also brilliant practitioners and students who, like Sydenham, saw and taught that one may profitably study individual processes and organs without making the facts acquired fit in with any preconceived hypothesis. This attitude is well presented in the following passage from a letter by John Locke, physician and philosopher, to W. Molyneux:

> "You cannot imagine how far a little observation carefully made by a man not tied up in the four humours, or sal, sulphur, and mercury, or to acid and alcali, which has of late prevailed, will carry a man in the curing of diseases though very stubborn and dangerous; and that with very little and common things, and almost no medicine at all."

It seems that our so-called therapeutic nihilists are not the first of their kind.

George Cheyne, with one of whose writings this paper will deal, was born in Aberdeenshire, Scotland, in 1671, the year in which Isaac Newton published his "Theory of Light." He died at Bath, England, in 1743. In his earlier years he was a follower of the iatromechanical school, so named because it attempted to explain all disease processes on a mechanical basis. He tells us that the first time he adventured in print was in a work on the theory of fevers, which he completed in a few days, and which was done in defense of his "great master and generous friend" Dr. Pitcairn. This was at the age of 31. He later sallied into a "book of abstracted geometry and algebra," entitled "Methodus Fluxionum Inversa." When 54 years old, or in 1725, he issued the fourth edition of the work with which this paper is more directly concerned, "An Essay of Health and Long Life." The date of the first edition I have not ascertained. The book is a curious mingling of abstract hypothesis with the common-sense results of a life of practical experience. It is dedicated to Sir Joseph Jekyll, Master of the Rolls, one of Cheyne's patients for whom it was originally written, and at whose request, says Cheyne, it was given to the public. It is an octavo volume of 232 pages, plus twenty pages of preface and a table of contents of the same length.

As regards the literary style and historical associations of the book, it is interesting to recall that Defoe's "Robinson Crusoe" was published in 1719, and Jonathan Swift's "Gulliver's Travels" in 1726; and that Cheyne was contemporary with the poet Pope, whose classic translation or English version of Homer's "Odyssey" was issued between 1723 and 1725. In the year of publication of this fourth edition of Cheyne's essay, Samuel Johnson was a mere youth of 16 years, and his famous dictionary first saw the light twenty years later. David Hume's charming but inexact history of England, and the foundation of the modern novel in the stories of Richardson, Fielding, Smollett and Sterne did not appear until from 15 to 35 years later. It was about 100 years since, in the dissecting-room and through the printing press, that William Harvey first taught his theory of the circulation.

* Read before the Medical Society of the City and County of Denver, March 19, 1912.

Turning to the western shores of the Atlantic, Philadelphia received from William Penn its first city charter in 1701. The same city built so fast that it reached its first financial panic in 1728. New York's first newspaper was started in 1725, and the first dramatic performances in New York were given in 1732; this year being also distinguished by the birth of George Washington.

In his preface Cheyne declares: "I have been often contented with plain and obvious Facts to account for Appearances; when, according to the Humour of the present Age, I might have run into refined Speculations of Metaphysicks, or Mathematicks. . . . I have consulted nothing but my own Experience and Observation on my own crazy Carcase and the Infirmities of others I have treated." The essay opens with the oft-quoted sentence, in this country frequently attributed to Benjamin Franklin: "It is a common Saying That every Man past Forty is either a *Fool* or a *Physician*;" and continues with this other, "Most Men know when they are ill, but very few when they are well." The place where many of Cheyne's observations must have been made is revealed in the phrase, "this universal Infirmary, *Bath*."

Chapter I, "Of Air," lays down principles for selecting a site for a house, and as to the rooms that are to be slept in by "tender People" in wet or dry weather. It suggests that "valetudinary, studious, and contemplative Persons," who have been "much exposed, or long abroad, in a Northerly or bleakish Easterly Wind," should "drink down, going to Bed, a large Draught of warm Water-gruel, or of warm small Mountain-wine Whey, as an Antidote against the nitrous Effluvia, suck'd into the Body, and to open the Obstructions of the Perspiration made thereby." We are warned that "from the beginning of November till towards the beginning of February, London is covered over with one universal nitrous and sulphurous Smoak, from the Multitude of Coal Fires, the Absence of that material Divinity the Sun, and the Consequence thereof, the falling of the Dews, and Vapours of the Night." We learn how the new-born infant, as soon as it is exposed to the element air, "has the little Bladders, whereof the Lungs consist, blown up into a perpendicular Erection on the Branches of the Windpipe," whereon "these little Bladders press upon and grind the grosser Particles of the Blood into more sizeable ones, that they may become small enough to circulate through the other capillary Vessels of the Body. This elastick Air, pressing equally every Way round, . . . shuts close the Scales of the Scarf-skin of healthy and strong Persons; . . . But in sickly, studious, and sedentary People, . . . the nitrous and watery Particles of the Air get a ready and free Entrance . . . into the Blood. . . . And thus begets all these Disorders of the Body, that Air thus and thus poison'd, was shewn capable to produce."

Chapter II discourses "Of Meat and Drink"; and this subject our author clearly and repeatedly shows as the greatest of all. His reasons for preferring certain foods above others are at times ingenious: "The Spring Vegetables, as Asparagus, Straw-berries, and some sorts of Sallading, are more easily digested than Pears, Apples, Peaches, and Nectarines; because they have less of the Solar Fire in them; their Parts are united by a weaker Heat." "The common Poultry, Hares, Sheep, Kids, Rabbits, etc. . . . are much more tender and readily digested than Cows, Horses, or Asses." As regards cookery, "Plain Roasting and Boiling is as high, as valetudinary, tender, studious, and contemplative Persons, or those who would preserve their Health, and lengthen out their Days, ought to presume on." The neurologist of to-day may take inspiration from the reference to the "History of the Milk Doctor of Croydon, who by living on Milk only, cured himself of an otherwise incurable Distemper, viz., the Epilepsy, and lived in perfect Health for sixteen Years after"; and the surgeons from the dictum that "the grand Maxim in the Cure of all Ulcers is, by Diet to bring them to the State of a Wound, and then they will cure of themselves."

Cheyne's estimate of the amount of "Food, sufficient to keep a Man of an ordinary Stature, following no laborious Employment, in due Plight, Health, and Vigour" is "8 Ounces of Flesh Meat, 12 of Bread, or vegetable Food, and about a Pint of Wine, or other generous Liquor in 24 Hours." The valetudinary and sedentary must lessen this quantity. "Most of all the chronical Diseases, the Infirmities of old Age, . . . are owing to Repletion. . . . Evacuation of one Kind or another is nine Parts in ten of their Remedy: For Cupping, Bleeding, Blistering, Issues, Purging, Vomiting, and Sweating, are manifest Evacuations, or Drains to draw out what has been superfluously taken down." "But," continues Cheyne, "any one may lose a Pound of Blood, take a Purge, or a Sweat; by dropping the great Meal, or abstaining from animal Food and strong Liquors, for four or five Days as effectually as by opening a Vein, swallowing a Dose of Pills, or taking a sudorifick Bolus." The frequent use of "some gentle domestick Purges" is repeatedly advised. Thus, "Tender Persons ought to use as much Abstinence, as they possibly can: And, if they neglect it, their only Relief is from frequent stomachick and Family-Purges." Bacon of Verulam is quoted to the like effect, and a prescription given, of which the main ingredient is rhubarb, there being added wormwood, orange-peel, nutmeg, cochineal and arrack.

It was a decidedly alcoholic age; but Cheyne, being well beyond the half of his allotted three-score years and ten, is strongly against alcoholic indulgence. For those who have suffered by erring in this regard he favors sudden abstinence; and he scoffs at the idea that this course may be dangerous. "It were," he says, "as reasonable for him that is fallen into the Fire or Water to lie there, because of the Danger of removing him suddenly." Yet he would not "discourage the innocent Means of enlivening Conversation, promoting Friendship, comforting the sorrowful Heart, and raising the drooping Spirits, by the cheerful Cup and the social Repast"; and admits that perhaps he may like "the harmless Frolick, the warm Reception of a Friend," more than he ought. "Next to Drams, no liquor deserves more to be stigmatized and banished the Repasts of the Tender, Valetudinary, and Studious, than Punch." "I could never," he says, "see any Temptation, for any one in their Senses, to indulge in this Heathenish Liquor, but that it makes its Votaries the soonest, and all of a sudden the deepest Drunk, holds them the longest in the Fit, and deprives them the most intirely of the Use of their Intellectual Faculties, and Bodily Organs, of any Liquor whatsoever." The author regards most malt liquors as hurtful; coffee as likely to be "of some Service to watry Stomachs"; green tea as a "good Diluter of the Food"; chocolate as "heavy and hard of Digestion"; and smoking, chewing and snuffing as "useful to flegmatick Constitutions; but to dry and lean Habits . . . pernicious."

In the short chapter "Of Sleeping and Watching" the word "watching" is evidently used in the sense of "waking." We are told that "the Valetudinary, Sedentary,

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and Studious, ought carefully to avoid evening Dews, nocturnal Studies, and unseasonable Watching; go to Bed by eight, nine, or ten; and rise proportionably by four, five, or six."

As regards "Exercise and Quiet," which are the subject of another chapter, it is remarked that "Whether we were so made before the Fall, as to live in intire Health, in a rigidly sedentary and contemplative Life, is a speculation of no great Consequence, . . . as there happened an intire Revolution in the Complexion and Qualities of the Minds of the First Pair." "The Passage where God tells Adam, That in the Sweat of his Brow he shall eat Bread, seems to be the Injunction of a salutary Penance, . . . not merely a Punishment." The author, who did not live in the days of street-cars and nickel fares, comments on the absolute necessity of "due Labour and Exercise," without which, he says, "the Juices will thicken, the Joints will stiffen, the Nerves will relax, and on these Disorders, Chronical Distempers, and a crazy old Age must ensue." The exercises which may be used for health include "Walking, Riding a Horse-back, or in a Coach, Fencing, Dancing, playing at Billiards, Bowls, or Tennis, Digging, Working at a Pump, Ringing a Dumb-Bell." "To the Asthmatick, and those of weak Lungs," he would "recommend Talking much and loud, even by themselves, walking up an easy Ascent." "To those who are troubled with the Stone or Gravel, to ride much over rough Cause-ways in a Coach." "To those that have weak Arms or Hams, playing two or three Hours at Tennis, or at Football, every Day. Temperance is to be joined to exercise, and the greater appetite obtained by it must not be indulged to the full. Cheyne is surprised "that Cold-bathing should ever have come into such Disuse, especially amongst Christians"; which reminds one of Ingersoll's reply to the preachers "that, with soap, baptism is a good thing." To the cold bath, in many cases, Cheyne would add the use of the flesh brush for a half hour night and morning. Indeed, he would extend the employment of these two therapeutic measures to those animals which are kept to be killed for human food.

About two years ago the Provident Life Assurance Company of New York issued a pamphlet in which it was shown that in Massachusetts, from the year 1880 to the year 1907, the death-rate between the ages of 40 and 50 had increased 35 per cent. The writer, who regarded the decade referred to as including the most valuable years of a man's life, concluded that this increase in the death-rate at a time of life when communicable diseases played a small part was due to the early wearing out of vital organs as the result of excesses in eating, drinking, working and playing — in short, to intemperance in the broad and general sense of the word. The remedy for such a state of things is well anticipated by Cheyne, who devotes a whole chapter of his book to "our Evacuations, and their Obstructions"; but also repeatedly insists on the need for temperance in all things, and particularly in the supply of fuel to the human economy. "The perpetual Gripes, Colicks, Loosenesses, hard Bellies, Chonkings, Wind, and Convulsive Fits, which torment half the Children of England, are intirely owing to the too great Quantities of too strong Food, and too rank Milk, thrust down their Throats." Again: "There is nothing more ridiculous, than to see tender, hysterical, and vapourish People, perpetually complaining, and yet perpetually cramming." And further, "that of those born sound here in England, the Headaches, Stomachaches, Colicks, and nervous Pains and Disorders, universally proceed from Idleness and Fulness of Bread." In Cheyne's opinion, chronic diarrheas are commonly the penalty of too much eating and drinking. In this connection, he quaintly declares that "he, who without firm Bowels, thinks to cure a nervous Distemper, labours as much in vain as he who would keep a Fiddlestring soaking in Oil and Water, to make it vibrate or play off a fine Composition of Musick."

The modern advertiser of kidney medicines should find an antidote in the statement that "though some People are frightened when they find their Water turbid, broken, and full of Brick-dust Sediment"; yet "that is the best Symptom it can have." To stop the "Flux of pale Water," which is attributed to food too heavy or labor too little, the patient is recommended "to take a little Gascoign's Powder, Confection of Alkermes, or Sir Walter Raleigh's Cordial at Night, and drink liberally of small warm Sack Whey, with a few Drops of Spirits of Hart's-horn, to set the Perspiration in order again." "Coffee-colour'd, Bloody, Whevish, or Purulent Water, or that with White Gravel, Films, Rags, or Bits of broken Membranes," we are told, "are well known to be Nephritick, or Symptoms of an Ulcer somewhere in the Urinary Passages."

Chapter VI, entitled "Of the Passions," has a decidedly metaphysical and religious bent, and its medical bearing is somewhat remote. The author aims to show that violent and sudden passions dispose to acute maladies, while "the slow and lasting Passions, bring on chronical Diseases; as we see in Grief, and languishing hopeless Love." Religion is declared to be the cure for the passions and the disorders they produce.

The concluding chapter contains a miscellany of observations, most of which the author had probably forgotten to incorporate in his earlier chapters. He laments that "it is become the Reproach of Physick and Physicians, that acute Cases cure themselves and chronical Cases are never cured." The word "scurvy" apparently had a much wider meaning then than now. Thus we read that "There is no chronical Distemper whatsoever, more universal, more obstinate and more fatal in Britain, than the Scurvy, taken in its general Extent. Scarce any one chronical Distemper but owes its Origin to a scorbutic Cachexie, or is . . . complicated with it." How true is the remark "That fine Folks use their Physicians, as they do their Laundresses, send their Linen to them to be cleaned, in order only to be dirtied again." The author plainly considers nerve fibers as being identical in structure with whalebone, ivory, horn, cartilage and hair. In another place he refers to the lacrimal gland as being at the corner of the eye next the nose. He argues strongly against the use of bleeding as a preventive against miscarriage. A superstition that is still with us is advocated in the statement that "Neither Sydenham nor Fuller, have been able to tell the Half of what obstinate Exercise will do, in low, cachectick, consumptive Cases." The profession of to-day would partly approve and partly scorn the idea that "The Custom of wearing Flanel, is almost as bad as a Diabetes." There is food for both thought and laughter in the statement that "Another Means of Health, to the Tender, Studious, and Sedentary, is much and often shaving Head and Face, and washing, scraping, and paring their Feet and Toes."

As his conclusion of the whole matter, Cheyne declares that "The Grand Secret and Sole Mean of Long Life, is

to keep the Blood and Juices in a due State of Thinness and Fluidity." "No voluptuous or lazy Person, unless he has had an original Constitution of Brass, was ever a long Liver. And even, as his Life has been more Misery and Pain, than ever a sober Gally Slave endur'd, his End, and the latter Part of his Days has been Rack and Torture, Horror and Despair." "The Ground-work must be laid, carried on, and finished in Abstemiousness. . . . And this alone will suffice to carry on Life, as long as by its natural Frame it was made to last, and will make the Passage easy and calm, as a Taper goes out for want of Fuel."

530 Metropolitan Building.

A PECULIAR STATE OF ASTHENIA OF SHORT DURATION, ENDING IN RECOVERY

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About ten years ago I reported a strange case of myasthenia before the Philadelphia Neurological Society. As this report has never been published and as it is germane to my present subject, I shall reiterate the chief features of the case before speaking of the others that have come under my observation.

CASE 1.—The patient was a physician, aged 35, a native of Pennsylvania, engaged in an arduous country practice in the western part of the state. His family history and his personal history were good. For the last fifteen years he had used tobacco moderately and alcohol occasionally. He had had gonorrhea but never syphilis. About Christmas time he had a mild attack of influenza, for which he stayed in bed less than two days. On the day he resumed work he was drenched by a rain and caught a cold, which was, however, not severe enough to interfere with his practice. Several days later, on January 10, he felt somewhat weak on arising from bed. During the day the weakness steadily increased and by evening he had to have assistance in getting into his phaeton. By night he could rise from a chair only with great difficulty, and on the following morning it required much effort to get out of bed. By January 13 he could not leave his bed without help. When in bed he could not put one foot over the other or flex the knees as long as the covers rested on the limbs. The weight of the bed-clothes was sufficient to neutralize what little power he had. If the arms were extended underneath the bed-covers he could not directly raise them but had to slide them up over the chest until they were clear of all weight. On one occasion a pillow toppled over on his face and it was only with supreme effort that he succeeded in tossing it off. One night he had turned with considerable difficulty on his side, but in a little while overbalanced himself and rolled over on his face. While in this position he almost smothered before he succeeded in regaining sufficient leverage to turn on his back. The patient did not think himself paralyzed but felt as though his muscular strength were utterly exhausted, as it might be from overfatigue. There was an entire absence of pain; appetite, digestion, the bladder and bowel functions were all normal. Mastication was somewhat difficult, but deglutition was not affected. Vision and hearing were not disturbed. As regards tactile sensibility, I am informed by Dr. J. M. Thorne, of McKeesport, who attended the patient, that it was normal. The knee-jerk was also normal. The mental processes were active, and, contrary to what might be expected, the patient was in a serene frame of mind, although he thought at different times that he was going to die. The temperature was persistently subnormal, not over 97; the pulse was as low as 45, and the respirations from 10 to 12. This low level of pulse, respiration and temperature was maintained for three or four days. Any physical effort was attended by profuse perspiration. At the end of ten days, when recovery from the general muscular weakness was almost complete, a left-sided facial palsy developed. It was unattended by pain and lasted ten days. When I saw him, which was two months after the beginning of his trouble, he still complained of being weak in the knees. I found nothing of moment on physical examination. The pupils were equal and reacted to light. There was no sway; the knee-jerk was exaggerated; there was no ankle-clonus and no Babinski reflex. The tactile and the thermic senses were undisturbed. The heart and lungs presented nothing abnormal. The blood-count showed 5,632,000 red cells, 10,500 white cells and 78 per cent. hemoglobin. No electric tests were made.

In the last note I had from him, dated April 2, he remarked that his strength had returned to him, but there was still a tendency to a feeling of nervousness after undue exertion or after holding his limbs in one position for any length of time.

To recapitulate: A man in good health, suffering only from a cold, is suddenly seized with profound weakness involving apparently all the voluntary muscles, causing no psychic, sensory or sphincteric disturbance and being marked by bradycardia, subnormal temperature and bradypnea. A facial palsy ensued ten days after the onset of the myasthenia. Recovery was complete in about two months.

In endeavoring to explain this quite extraordinary case, which did not fit into the category of myasthenia gravis pseudoparalytica, periodic palsy or Landry's palsy, and which was evidently not hysteria, I took refuge in a theory that at that time seemed somewhat fanciful, namely, that the myasthenia was due to temporary functional insufficiency of the adrenals. This theory was in keeping with the facts of animal experimentation as they were available at that time and seemed to me to explain the muscular prostration and the hypothermia. The facial palsy could not be explained on the basis of this hypothesis and had to be considered an accidental complication. This view is the more plausible as the palsy appeared suddenly during convalescence.

From time to time this case recurred to my mind, especially in 1908, when Dr. Lavenson had his able article on suprarenal insufficiency in preparation and discussed it with me. But not until recently did I see any case that bore a resemblance to it.

CASE 2.—In February, 1912, a physician, 49 years old, consulted me on account of a feeling of great exhaustion which made every muscular act an effort. He dragged himself to his work with difficulty and was listless and depressed. There was no lack of control over the muscles, but they seemed to be fatigued before they were used. The pulse was small and feeble—98; the temperature, 96.1. The systolic pressure, which had been taken a few days before, had been found to be from 98 to 100. The urine was normal. The patient could not account for his prostration. He had had no acute illness, no shock; digestion and bowels were normal. As far as he knew he was otherwise in good health. His only complaint was that for several years he had had occasional attacks of precordial pain of mild type, lasting for half an hour or an hour and unaccompanied by a sense of anxiety—in short, not bearing the characters of an angina pectoris. The heart seemed to lack what I would call snap; the tones were soft but there were no murmurs. Finding no definite signs by which this condition could be explained, I decided that there must be some fault on the part of the organs of internal secretion, most probably the adrenal; and on the strength of this theory, which strongly appealed to the patient himself, I prescribed suprarenal extract. Recovery was prompt, whether *propter hoc* or merely *post hoc* I cannot say.

CASE 3.—H. L., aged 37, married, began in April, 1909, to have epileptiform convulsions. Though a history of syphilis was not obtainable, the convulsions ceased under antisyphilitic treatment, and three disfiguring exerescences of the skull promptly melted away. Since then the man has been well except for occasional headaches and attacks of indigestion brought on by imprudent eating. Feb. 10, 1912, without ascertainable cause he felt chilly and had a little nausea. He rapidly became weak and found that even slight exertion exhausted him. His color was pale and sallow; temperature 96.1; pulse 48; the systolic pressure 92. Otherwise examination revealed nothing abnormal; the urine was negative. I ordered suprarenal extract, 5 grains three times a day, and advised the patient to go home. When I saw him again a few days later he felt well, though his pulse was still slow.

CASE 4.—Another instance remains to be cited. During my second year in the medical school I had an experience that I remember with great vividness. I was seated one evening at

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my books, feeling as well as usual, when rather suddenly I found myself growing cold and weak, and had a sense as if my life-forces were ebbing away. I had no pain, only a sense of approaching dissolution. My temperature I found to be 96, and my pulse 46. One who knows the psychology of the medical student can imagine the workings of my mind. I do not recall whether I made any attempt at self-treatment, nor how long I was ill, if ill I was. But I remember distinctly that, contrary to my expectations, I survived. Since then I have not had a similar attack.

Leaving out for a moment the first case, the three others, including my own, have in common a sense of physical weakness amounting to actual prostration, a feeling of coldness, a subnormal temperature, and in two cases slow pulse and low blood-pressure. Recovery was prompt — in the two recent cases within three or four days.

How are we to explain this condition? To say that there was an infection brings the solution no nearer, for what infection is accompanied by persistently subnormal temperature, bradycardia and muscular exhaustion? It is true, during convalescence from typhoid fever, pneumonia, influenza, tonsillitis and perhaps malaria, one sees at times subnormal temperature and bradycardia; but none of these diseases had preceded the asthenia in my cases. The first patient did have, two weeks before his myasthenic symptoms set in, a febrile attack of two days, but that there was any direct connection between this trivial attack and the other illness is unlikely.

It seems to me that these cases find their readiest explanation in the assumption of some disturbance in the functions of the organs of internal secretion, through which the sympathetic nervous system and the voluntary muscles suffered a change. The chief controller of these two systems, as far as we know at present, is the adrenal, or better the chromaffin system. The functions of this are manifold and complicated, but at this moment two particularly concern us, namely, the angiotonic and the antitoxic. Through the former, vascular tone and blood-pressure are maintained; through the latter, the fatigue products of muscular activity are neutralized. No definite clinical picture has as yet been established of mild temporary insufficiency of these functions. Treatises on diseases of the suprarenal gland hitherto have dealt only with such affections as are fatal in their consequences. By far the largest share of attention has been given to Addison's disease, which nearly all authorities attribute to destructive changes in the adrenal, although a few admit a merely functional disturbance of the gland or of the entire chromaffin system as a basis for the Addisonian symptom-complex.

In the more recent literature, however, in addition to Addison's disease, cases are recorded in which various acutely fatal conditions were at autopsy found associated with destructive changes—hemorrhagic, necrotic, inflammatory—of the adrenals. The latter conditions are distinguished from Addison's disease by the absence of pigmentation and by the shortness of their course. The cases may be classified[1] into several groups:

1. Those characterized by shock, gastro-intestinal symptoms, bradycardia, lumbar pain and death in a few days—a clinical picture somewhat resembling that of acute pancreatitis.

2. The asthenic type, in which the predominant feature is profound asthenia, ending in death within a few days.

3. Cases of sudden death, in which the autopsy shows as the only adequate morbid change a destructive lesion, usually hemorrhagic, of the suprarenal gland.

4. A nervous type, marked by convulsions, coma or delirium, with muscular twitchings.

Another type of doubtful nature is one characterized by hemorrhage into the suprarenal glands with hemorrhagic eruptions in other abdominal viscera and the skin.

In some cases of so-called acute suprarenal insufficiency, as for instance the interesting one reported by Cooke,[2] the termination only is acute. With a progressively destructive lesion of the glands, tuberculosis for example, there exists no doubt for a long time an insufficiency of mild type which goes unrecognized. Finally, and with apparent suddenness, the function of the gland becomes wholly inadequate and an acute catastrophe ensues. We meet with an analagous condition in Bright's disease, in which a mild uremic state may for days and weeks precede the convulsive explosion.

In Biedl's exhaustive work on internal secretions,[3] I have not found any reference to transitory adrenal insufficiency. Sergent[4] and other French writers believe that such a condition may occur in the course of acute infectious diseases. It cannot be doubted that the glands of internal secretion are affected in acute disease, but the present methods of investigating their function do not give us an adequate insight into the subject. It seems to me highly probable that the postfebrile hypothermia, bradycardia and exhaustion which may follow even diseases of very short duration are in part due to disturbed function of the hormonogenic organs.

I believe that the cases I have reported, especially Cases 2, 3 and 4, are best explained on the view that there was a functional insufficiency of the adrenals by which the body was temporarily deprived of its proper meed of adrenal secretion. Theoretically we might conceive, instead of a deficiency of the hypertensive epinephrin, an accumulation in the blood of hypotensive substances, the existence of which has been predicated by Abelous and Langlois, Pearce and others. But in doing so we increase rather than lessen our difficulties. It is much simpler to blame the adrenals, or perhaps the entire chromaffin system, the *fons et origo* of the substances maintaining the general vascular and muscular tone.

The symptoms of non-fatal hypoadrenalism may be described as those of mild shock — subnormal temperature, great muscular weakness, coldness of surface and low blood-pressure. The pulse is usually slow; the duration variable—from a few days to a few weeks. It is doubtful whether our present tests for epinephrin in the blood are delicate enough to determine the existence of such a state as I have described, but where laboratory facilities are at hand such tests might readily be made. Rest and the administration of suprarenal extract — 5 grains two or three times a day — is the treatment that naturally suggests itself for temporary hypo-adrenalism.

It is more than likely that the first case, in which the myasthenia reached a grave degree, was also dependent on adrenal insufficiency. The "glandular" theory of myasthenia gravis has been advanced by several writers in recent years (Zudemans, Raymond and Massolongo); the tendency at present is to look on the condition as dependent on disturbances not only of the adrenal, but also of other glands of internal secretion. There is still, to be sure, much theory and little fact, but the hypothesis is attractive and may prove fertile.

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1. Lavenson: Arch. Int. Med., August, 1908, ii, 70.

2. Cooke: Observations on the Blood-Pressure-Raising Substances of the Adrenals in Acute Adrenal Insufficiency, Arch. Int. Med., January, 1912, ix, 108.

3. Biedl: Innere Sekretion, 1911.

4. Sergent: Rev. de méd. int. et de thérap., 1909, p. 807.

THE CHICAGO EPIDEMIC OF STREPTOCOCCUS SORE THROAT AND ITS RELATION TO THE MILK-SUPPLY *

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CHICAGO

In the latter part of December, 1911, Chicago was visited by an epidemic of sore throat, which for widespread distribution and severity was unique in the history of the city. The greatest number of cases appeared about Christmas and New Year's Day, but during the months of January and February there were lesser outbreaks of new cases and a notable number of relapses and complications from an earlier infection. Some of the cases were at first mistaken for diphtheria, which had been quite prevalent in November. During the latter month the health department received for diagnostic purposes 637 cultures that contained Klebs-Loeffler bacilli and 1,045 cultures that were negative. In the month of December, although the positive diphtheria cultures fell to 379, the negative cultures increased to 1,234.

CLINICAL FEATURES

The onset was usually abrupt and was characterized by chilliness or rigor, general muscular soreness, a dull headache, and in some instances, by nausea and vomiting. At first a diffuse congestion of the throat was present and the patient complained of pain on swallowing. In a few hours discrete patches of exudate appeared on the tonsils or pharynx that occasionally simulated a diphtheritic membrane. The temperature was high and the leukocytes were increased in number. The prostration was extreme. The pulse was often relatively slow, a peculiarity ascribed by Preble to a toxic irritation of the vagus nerve. The cervical glands were usually enlarged and tender. The fever subsided in two or three days and in mild cases the patient complained only of weakness and lassitude. Very frequently, however, within a week or ten days a second attack of sore throat set in, marked by swelling of the tonsils and cervical glands. The edema was at times so great that it was impossible to swallow liquids or even saliva. Peritonsillar abscess or suppuration of the lymph-nodes were comparatively uncommon, but when they did occur and were drained, recovery was hastened. In unfavorable cases the germs invaded the blood-stream and gave rise to numerous complications.

One group of 173 typical cases, in which the symptoms were carefully recorded, shows that suppuration of the cervical glands occurred sixteen times and peritonsillar abscess eight times. There were only six instances of otitis media, four of conjunctivitis and eleven of bronchitis. Arthritis was a remarkably common complication, being present in seventeen cases, once with pus in the joints. A skin eruption was noted in seven cases, four resembling erysipelas. The other three were of a purpuric nature, two developing into the clinical picture of Henoch's purpura. Bronchopneumonia was found in eight patients and often led to a fatal result, especially in old people. Pleurisy was observed three times. Nephritis came on in five patients and, as a rule, ended in recovery. Five cases showed an endocarditis of the mitral valve. One of the most peculiar and dangerous complications was peritonitis, which was responsible for many deaths. There were nineteen fatalities in this series. The cause of death in nine cases was attributed to idiopathic peritonitis, in four cases to pneumonia, in three cases to endocarditis and in three to septicemia.

BACTERIOLOGY

Examination of smears taken directly from the throat showed cocci growing in short chains or pairs and surrounded by a capsule. On this account they were at times mistaken for pneumococci. But cultures made clear a true streptococcus growing abundantly in blood-agar, somewhat less hemolytic than the ordinary *Streptococcus pyogenes*. This organism, which has been fully described by Davis and Rosenow,[1] was recovered in twenty-eight cases of this series.

DISTRIBUTION

That this epidemic type of sore throat was entirely new and different from the ordinary tonsillitis was generally agreed on by physicians. It was also a subject for comment that the north and south sides of the city were equally affected and at the same time. An impression gained ground that a pandemic of sore throat was sweeping over this section of the country after the manner of the great influenza outbreak in 1889. By correspondence with physicians in seventy counties of Illinois, we found that tonsillitis was unusually prevalent this winter throughout the state, but that in only one locality was the epidemic similar to ours in severity and extent, namely, in the village of Batavia. The significance of this fact will be considered later.

RELATION TO MILK-SUPPLY

During the height of the epidemic no satisfactory explanation was found for the sudden outbreaks of new cases in widely separated parts of the city. But a suspicion of the milk as a carrier of the infection was kept alive by the direct causal relationship which had been established in Boston a year before between the milk-supply and the epidemic of sore throat.[2]

Early in March we decided to investigate this question.[3] Very soon it became apparent that most of the victims of sore throat were consumers of milk from a single dairy which will be hereafter designated as Dairy X.

Because of the extent of the epidemic a complete house-to-house canvass of the city was not feasible. We, therefore, divided our investigation into four different methods of inquiry, which would tend to control the results. The first study was limited to severe and typical cases; the second to a comparison of morbidity between the customers of Dairy X and other dairies; the third, a comparison of the morbidity among the nurses in hospitals supplied by Dairy X with that of nurses in hospitals supplied with milk from other dairies; finally a house-to-house canvass of the village of Batavia which is partly supplied by Dairy X.

1. Milk-Supply in a Series of Severe and Typical Cases.—This series comprises 173 cases which were originally collected on account of their severity and conformity to the epidemic type of throat infection. About forty of this group had been diagnosed by the finding of streptococci in smears from the throat, while in twenty-eight the organisms had been grown in culture. Most of these cultures were studied by Davis and Rosenow and were identified as the type peculiar to the epidemic. Of the total of 173 cases, 147, or 85 per cent., were users of Dairy X milk at the time of their illness. Of the total

* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

1. THE JOURNAL A. M. A., March 16, 1912, p. 773.
2. Winslow: Boston Med. and Surg. Jour., Dec. 16, 1911.
3. THE JOURNAL A. M. A., April 13, 1912, p. 1111.

of nineteen fatal cases, fifteen, or 79 per cent., were definitely known to have used Dairy X milk at the time they were stricken.

2. Comparison of Morbidity in Various Milk-Routes.—It should be stated that Chicago grants a license to 2,700 milk-wagons and that Dairy X controls 100, or less than 4 per cent. of these wagons. Since, however, their distribution is chiefly in the better residence district of the north and south sides, which are the districts investigated, their proportionate supply is much greater. It is estimated that about 10 to 12 per cent. of the residents in these districts use Dairy X milk. Hence, we should expect to find in any group of cases occurring in these districts that approximately 12 per cent. were users of Dairy X milk, in case milk was not a cause of the disease. If the milk is guiltless, then the percentage of morbidity along a Dairy X route and a control route in the same neighborhood should be nearly the same. A comparison was made by different investigators of the incidence of sore throat along a Dairy X route and a route of another dairy on the north side, the Twenty-Second street district and in Hyde Park.

By glancing at the column of totals in Table 1 it is seen that 51 per cent. of the households using X milk

TABLE 1.—MORBIDITY IN DAIRY X ROUTES COMPARED WITH THAT IN OTHER DAIRY ROUTES

Locality	Dairy	No. Houses Investigated	No. Houses Affected	Per Ct. Houses Affected	No. Persons Attacked	Ave. No. Cases to Houses Affected	Ave. No. Cases to Houses Investigated	Ratio of Morbidity
Hyde Park	X	75	38	50	97	2.6	1.3	14.2:1
	A	98	10	9.8	11	1.1	.09	
22d Street	X	83	39	47	81	2.1	.98	14: 1
	C	116	6	5	8	1.3	.07	
North side	X	94	52	55	125	2.4	1.3	13.9:1
	G	118	8	6.8	11	1.4	.093	
Total	X	252	129	51	303	2.37	1.1	14: 1
	Others	332	24	7.2	30	1.27	.084	

were affected, as contrasted with 7.2 per cent. of those using other milk. Another interesting record is that the average morbidity for each affected household supplied by X milk is 2.3 persons as compared with 1.2 for each affected household supplied by other milk. The ratio of morbidity among users of Dairy X milk to the morbidity among users of other milks is as 14 to 1. That is to say, in an equal number of households supplied, fourteen times as many individuals contracted sore throat among the X milk consumers as among consumers of other milk. This ratio was almost identical in the three districts canvassed.

3. Comparison of Morbidity Among the Nurses in Different Hospitals.—It is matter of common knowledge that sore throat prevailed to an alarming degree among the patients of certain hospitals, but statistical evidence on this point is difficult to obtain. The nurses in the large hospitals furnish excellent material for study, because they take their meals in one place and a careful record is kept by the superintendent of the day of onset of any illness, when the nurse is relieved from duty. In several of the hospitals cultures are made, as a matter of routine, from all nurses with sore throat.

As indicated in Chart 1, two of the hospitals obtain their milk-supply from Dairy X. The others use milk from several other dairies (indicated by capital letters). Of the total 230 nurses in the Cook County Hospital, nine or 4 per cent., were ill with sore throat. Of St. Elizabeth's forty-six nurses and Policlinic's twenty, none were ill. Of St. Luke's 150 nurses, eleven or 7.3 per cent.; of Mercy's 150 nurses, six or 4 per cent.; of Presbyterian's 125 nurses, nine or 7.2 per cent. In contrast to these figures, Henrotin hospital reports sixteen cases of sore throat out of a total of thirty-three nurses, or 48 per cent., and Michael Reese, out of a total of 120 nurses, sixty-four cases or 53 per cent. The two last named use milk from Dairy X.

The total number of nurses using X milk in both hospitals was 153, of whom eighty or 52 per cent. were attacked. The total number of nurses using milk from other dairies was 721, of whom thirty-five or 4.8 per cent. were attacked. Comparing the two groups, a ratio of eleven cases of sore throat developed among the users of

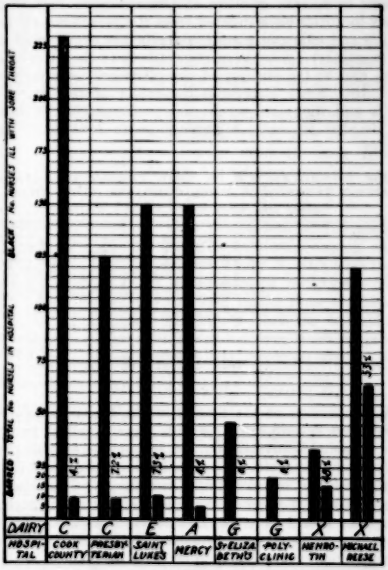

Chart 1.—Comparative prevalence of sore throat among the nurses in Chicago hospitals and the milk-supply of each hospital. Note the high percentage of morbidity in the two hospitals supplied by milk from Dairy X.

X milk to every one that developed among the users of other milk.

Two striking situations should be related which present all the details and convincing results of carefully planned experiments. The Henrotin and Policlinic hospitals are not far apart and both are supplied with nurses from one training-school. The nurses occupy a common dormitory and have continuous service in one or the other hospital where all meals are taken. The Henrotin uses Dairy X milk, while the Policlinic uses Dairy G milk. During the months of December, January and February, ten of the twenty-three nurses who were working and eating at Henrotin had sore throat (as well as six of the ten additional graduate nurses). None of the twenty nurses on duty at the Policlinic had sore

throat during this period, although they were living in close intimacy at the dormitory with the Henrotin nurses.

At Michael Reese Hospital the seventy occupants of the children's wards passed through the epidemic without one case of sore throat. This was remarkable when one considers that a very large number of nurses and interns attending them were attacked. All the hospital supply of milk comes from Dairy X, but the milk for the children is delivered in a raw state and is especially pasteurized in the hospital by the holding method, while the milk for the rest of the hospital and nurses is pasteurized at the Batavia plant. No stronger proof could be furnished of the value of thorough pasteurization.

These incidents also indicate that proximity or prosodemic infection was not responsible for a single case of sore throat in these two large groups.

4. The Batavia Epidemic and Its Relation to the Milk-Supply.—Examination of the reports from physicians in seventy counties of Illinois shows that while many localities have suffered from the prevalence of tonsillitis and enlarged glands, Batavia has experienced an extraordinary epidemic in respect both to the number of cases and to the severity of complications, especially of arthritis. Since Batavia is the center of the Dairy X herds and the place where the pasteurization is done, we decided to make a house-to-house canvass of the village.

TABLE 2.—PREVALENCE OF SORE THROAT IN BATAVIA AMONG USERS OF X MILK, COMPARED WITH THAT OF USERS OF MILK FROM OTHER DAIRIES

Dairy	No. Houses Investigated	No. Houses Affected	Per Ct. Houses Affected	No. Persons Attacked	Ave. No. Cases to Houses Affected	Ave. No. Cases to Houses Investigated	Ratio of Morbidity
X	50	33	66	73	2.2	1.45	3.6:1
All others	160	43	27	66	1.5	.4	

A comparison of the figures in the Dairy X column shows that seventy-three persons were attacked in the fifty households investigated, or an average of 1.45 person to each household. This is a higher rate of morbidity than was found in any locality in Chicago. The returns from patrons of other dairies, however, is much higher than was found in control routes in Chicago. These cases of sore throat occur among the customers of three small dairies that sell only to the local trade.

It seems probable that in Batavia not only the milk from Dairy X, but also the milk from other small local dairies is responsible for the sore throat outbreak.[4]

We would emphasize the fact that the X milk consumers in Batavia developed 3.6 times as many cases in proportion to the number of households supplied as the consumers of milk from all other dairies, and that the morbidity-rate of the Batavia users of X milk exceeds that of the Chicago consumers of the same.

EXTENT OF EPIDEMIC

On the basis of our returns we estimate conservatively that a minimum of 10,000 persons were affected in Chicago. The comparative freedom of the west side from sore throat is probably explained by the fact that very little X milk is marketed in that section. The evidence presented, we believe, is conclusive that the great majority of the cases were direct infections from drinking the milk of Dairy X. Our attention was then directed to the source of contamination of this milk.

INVESTIGATION OF THE CONTAMINATION OF MILK

This inquiry was directed along three lines:

1. The search for any unusual prevalence of mastitis among the cows in the X Dairies.

2. The search for any cases of sore throat among the farmers and milkers.

3. The study of the pasteurizing efficiency.

1. Mastitis Epidemic.—Mastitis or garget is often caused by a streptococcus which is not pathogenic to rodents or to man. Under certain conditions and environment, however, this bovine streptococcus may acquire virulency to man. According to Savage[5] the proportion of cows with mastitis is decidedly higher in the herds implicated in a milk epidemic than in other herds. In the London district the average percentage of mastitis for six years was less than 1 per cent.; the maximum was 2.2 per cent. In the report to the Chicago Health Department on eighty-four herds, including about 1,848 cows, which furnish Dairy X milk, there were eighty-five cases of mastitis in December, January and February, or about 4.6 per cent. The farmers commented on the unparalleled number of cases and their severity. They said the first symptom was a redness or rawness at the end of the teat; then a creeping inflammation up the duct that ended in caking of the udder. Such a description strongly hints at the possibility of the introduction of human infection through the hands of the milker.

2. Sore Throat on Dairy Farms.—Sore throat among the farmers and milkers at the time of the mastitis outbreak furnishes an important link in the evidence. But the simultaneous existence of mastitis in the cows and sore throat among the farmers on the same farm fulfils all the conditions necessary for the contamination of the milk. A history of sore throat of the epidemic type was established on eleven farms supplying Dairy X, with a total of twenty-nine cases of illness. On nine of these farms there was also mastitis among the cows. One cow had a chronic abscess of the hind quarter of the udder that began late in December. The pus milked from this teat was thrown away, but the milk from the other quarters was used continually and at the time of our examination contained pus in large quantity. About December 18, a sixteen-year-old girl on this farm was very ill with sore throat.

On another farm supplying Dairy X, milk was taken by Dr. Davis from a cow with typical mastitis of five weeks' duration and streptococci were found. At the same time a culture was obtained from the throat of a girl on the same farm who had five weeks before been afflicted with sore throat and acute arthritis. This also showed streptococci. Dr. Davis found that both bovine and human strains were fatal to guinea-pigs and rabbits. A third farm showed the coincidence during the latter part of December of eleven cases of mastitis in the cows and of sore throat among all three milkers. The milk from these diseased cows was sometimes thrown away, sometimes saved, "depending on how it looked."

From these data we may assume that a rather constant flow of streptococci was taking place from certain farms to the pasteurizing plant at Batavia during the winter months.

4. Space does not permit a detailed presentation of the data concerning these local dairies. We hope to include this and other pertinent matter in a later paper.

5. Savage: Diseases of the Cow Affecting the Milk in Their Relationship to Human Disease, Royal Soc. Proc., 1911, lv, 73.

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3. Inefficient Pasteurization.—The pasteurization of practically all milk delivered by Dairy X during the winter was done at the Batavia plant. The process used is the so-called "flash" method, by which the milk is supposed to be heated momentarily to 160 F. An automatic device makes a written record of the temperature.

The chart constructed from these records is intended to show the percentage of failure or inefficiency of pasteurization day by day. If, for example, the temperature is too low for one hour of a total of four hours' pasteurization on a given day, the record shows a fall of 25 per cent. for that day. The fluctuations of temperature were often pronounced, a minimum temperature of 130 F. occurring on several days. These fluctuations are not represented on the chart.

A perusal of Chart 2 brings out most pronounced failures of pasteurization on December 17, 19, 28, 30 and on January 7 and 11. One should compare with the first two dates the explosive outbreak which began December 21, reached its climax Christmas day and rapidly subsided. The second explosive outbreak was on January 1 and 2. A smaller eruption of cases occurred from January 10 to 17. The pasteurized milk was delivered the following morning and consumed on the second and third day from pasteurization. Allowing thirty hours to four days for the incubation period of the sore throat, we see that the explosive outbreaks of cases corresponded in point of time to the breaking down of pasteurizing efficiency.

In spite of the contamination of the milk by means of sore throat infection of the milkers and mastitis of the cows, there is every reason to believe that the final responsibility for the epidemic rests on inadequate and unreliable pasteurization. The absolute protection of the children at Michael Reese Hospital from the contamination by means of efficient pasteurization demonstrates this point. Pasteurization by the "holding" method, maintaining a temperature of 145 F. for twenty minutes, is considered by experts to be the only reliable means of destroying pathogenic bacteria.

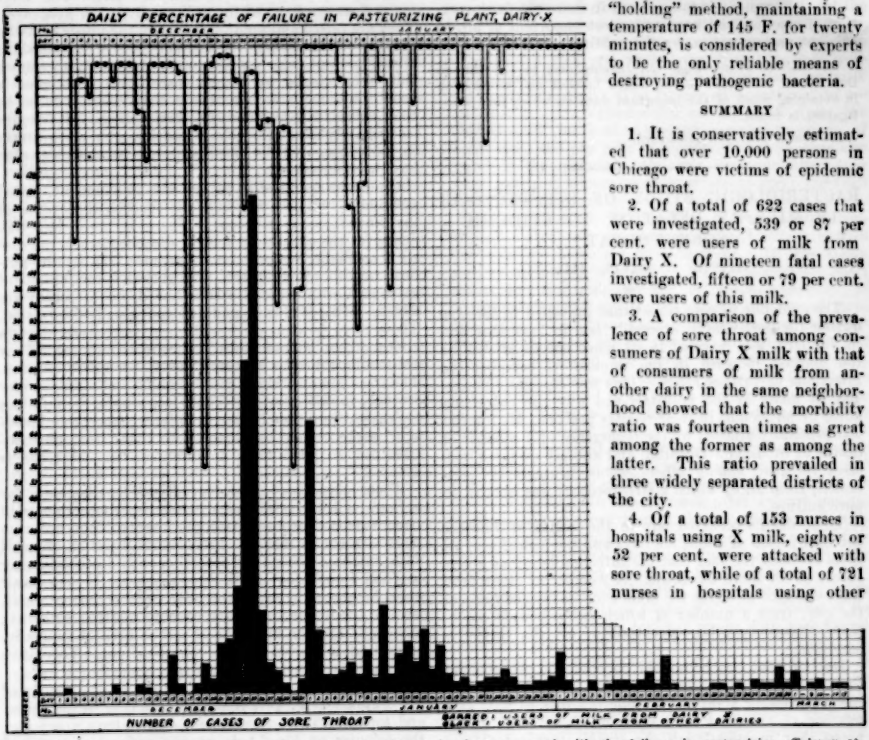
DAILY PERCENTAGE OF FAILURE IN PASTEURIZING PLANT, DAIRY X
DECEMBER
JANUARY
FEBRUARY
MARCH
NUMBER OF CASES OF SORE THROAT
SHADED: USERS OF MILK FROM DAIRY X
BLACK: USERS OF MILK FROM OTHER DAIRIES

Chart 2.—Explosive outbreaks of sore throat cases in Chicago, by days, compared with the failures in pasteurizing efficiency at the plant of Dairy X.

SUMMARY

1. It is conservatively estimated that over 10,000 persons in Chicago were victims of epidemic sore throat.

2. Of a total of 622 cases that were investigated, 539 or 87 per cent. were users of milk from Dairy X. Of nineteen fatal cases investigated, fifteen or 79 per cent. were users of this milk.

3. A comparison of the prevalence of sore throat among consumers of Dairy X milk with that of consumers of milk from another dairy in the same neighborhood showed that the morbidity ratio was fourteen times as great among the former as among the latter. This ratio prevailed in three widely separated districts of the city.

4. Of a total of 153 nurses in hospitals using X milk, eighty or 52 per cent. were attacked with sore throat, while of a total of 721 nurses in hospitals using other milk, only thirty-five or 4.8 per cent. were affected.

5. Returns from seventy counties in the state of Illinois indicate in many communities a prevalence of tonsillitis, but only one locality reports an epidemic comparable to the Chicago outbreak in extent and severity. This locality is Batavia, where the X milk is collected from the dairy farms and pasteurized. Batavia is partly supplied with X milk.

6. An epidemic of mastitis involving 4.6 per cent. of the cows supplying milk to Dairy X occurred during the winter months, and was worst about the Christmas holidays

7. Sore throat of the epidemic type was prevalent among the farmers and milkers supplying Dairy X. Often bovine mastitis and human sore throat prevailed on the same farm at the same time.

8. A virulent streptococcus was isolated by Dr. Davis from the milk of a cow with chronic mastitis and from the throat of a girl on the same farm who had been ill with sore throat and arthritis.

9. The pasteurization records reveal a remarkable degree of failure to maintain a proper temperature. The days on which the most striking failures of pasteurization occurred shortly preceded the great outbreaks of sore throat.

10. The remedy is to be found in more careful inspection of cows and milkers, and, most important of all, in efficient pasteurization by the holding method.

We wish to acknowledge our indebtedness to the Chicago Department of Health for its active interest and cooperation in obtaining much of the important data on which this investigation is based.

122 South Michigan Boulevard.

BACTERIOLOGIC STUDY OF STREPTOCOCCI IN MILK IN RELATION TO EPIDEMIC SORE THROAT *

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CHICAGO

The epidemic of sore throat that prevailed in Chicago during the past winter, especially late in December and in January, was revealed in its more serious aspects by the marked increase in the number of complicating infections of various kinds. This was especially noticeable at many of the hospitals and was also commonly noted by physicians in their regular practice. My interest was especially aroused by the occurrence of a number of deaths at St. Luke's Hospital, and autopsy on three such cases revealed, among other lesions, acute septic peritonitis, from all of which a streptococcus was isolated in pure culture.

These deaths occurred late in the month of January within a period of about ten days and the histories in all cases revealed the fact that the infection began as a sore throat or an acute tonsillitis. A number of other fatal cases occurred at about the same time in various parts of the city, from a number of which cultures were made; they showed similar streptococci as the infective organism.[1]

During what may be termed the epidemic period about forty-five strains of streptococci were isolated from such cases, including a variety of complications as well as a number of autopsies. In studying these cocci it was noted that practically all the strains that came from the varied complications, those isolated from the autopsies and also some, but not all, from sore throats had certain peculiarities by which they were quite readily differentiated from ordinary streptococci. Commonly, however, from sore throats, even from cases which were typical clinically, the ordinary *Streptococcus hemolyticus* was found.

The streptococcus, as it appears in smears of the exudates, occurs in pairs or very short chains and may be slightly lanceolate in form. In the chains, when present, the cocci are arranged in twos. They are strongly Gram-positive and surrounded by a definite capsule. The capsular substance is distinct but less abundant than that surrounding the *Streptococcus mucosus*. It is also less abundant than that about pneumococci and does not indent, or only very slightly so, between the pairs as does the pneumococcus capsule.

On artificial cultivation of this streptococcus certain more or less characteristic features appear, especially on blood-agar plates. The colonies are larger and more moist than are those of the ordinary type (*S. pyogenes*). They are raised and tend to spread on the upper or under surface of the media. A distinct zone of hemolysis is always present, which is clear with often a faint greenish tint when viewed by transmitted light. This zone is usually but not always narrower than that produced by the ordinary *Streptococcus hemolyticus*. It begins immediately about the colony and its outer margin may be indistinct. All the blood-corpuscles in this clear zone have been dissolved.

On blood-agar slants the growth is abundant, raised and moist but does not have the mucoid appearance of the *Streptococcus mucosus*. There is much less tendency for the colonies to remain discrete than is the case with ordinary *Streptococcus pyogenes*. In broth, uniform turbidity is produced. The growth is very abundant in sugar broth especially if a few drops of serum are added. Milk is always acidified and usually coagulated. These cocci ferment glucose, lactose, saccharose, dextrin and maltose, but not inulin, mannite or raffinose. They are readily killed by heating to 60 C. for thirty minutes. The cocci are only slightly bile-soluble and autolyze very strongly in salt solution. These latter tests, their failure to ferment inulin and their hemolytic property on blood-agar, serve clearly to differentiate them from pneumococci and to place them definitely in the streptococcus group.

These organisms are very highly pathogenic for animals, killing guinea-pigs in relatively small doses in from twenty-four to forty-eight hours. They are even more virulent in rabbits. Intravenous injection of small doses causes a generalized infection with death following in from twenty-four to thirty-six hours. If very small doses be given the organisms, like ordinary streptococci, tend to localize in the joints, causing multiple arthritis; also there may be infection of serous cavities generally, and local abscesses in the myocardium. Vegetative endocarditis with hemorrhages may occur but is rare.

As stated above, hemolytic streptococci, apparently of the ordinary type, were common, especially in the throat and tonsils. These streptococci do not have a capsule; the colonies on blood-agar possess wide clear zones of hemolysis; they tend to spread less on the surfaces, and are smaller and less moist than the organism above described. On sugars, milk and other mediums these two varieties of streptococci grow practically alike. The relation of these two types of streptococci is undoubtedly a very close one and certain facts would seem to indicate that the one is simply a modified form of the other. When grown on ordinary mediums the encapsulated coccus—at least some strains—loses its capsule and the growth on slants is less profuse and moist. By animal passage the capsule and the other properties mentioned return. The profuse moist appearance of the colonies, it may be stated, seems to be dependent on the capsular substance. While this seems to be true of some strains other

* Read in the Section on Practice of Medicine of the American Medical Association, at the Sixty-Third Annual Session, held at Atlantic City, June, 1912.

From the Pathological Laboratory of St. Luke's Hospital.

1. It was about this time that, in discussing the matter with Dr. E. C. Rosenow, I learned that he had had a similar experience as regards the unusual number and peculiar character of cases of streptococcus infections. This led to our publication of a statement on this subject, which appeared in THE JOURNAL A. M. A., March 16, 1912, p. 773.

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strains maintain their peculiar characteristics for a long time (several months) with little or no change.

Buerger[2] has called particular attention to such encapsulated streptococci. These cocci, he states, are not uncommonly found in exudates and one can predict the presence of capsules from the profuse watery growth on glucose-serum agar. They usually lose their watery growth after a few transplantations. He further states that the colonies may look like those of *Streptococcus mucosus* immediately after isolation from the blood, but later they cause distinct hemolysis like the ordinary streptococci. Bail and Kleinhans,[3] in a study of encapsulated streptococci, state that in the animal body certain strains of streptococci readily acquire capsules, while others do not, there being evidently considerable variation in this regard. I think that there can be no doubt but that these encapsulated streptococci found in the epidemic cases belong to the type spoken of by these workers. The fact that the ordinary hemolytic streptococci were quite commonly found in the throats, while from the blood, abscesses, empyema, autopsy material, etc., the encapsulated organisms were obtained undoubtedly indicates, I think, that the capsules were acquired in the body of the infected individual and were probably either directly or indirectly related to the virulence of the strain.

It would seem, then, that these streptococci appear in capsulated and non-capsulated forms depending on certain environmental factors and probably do not differ essentially from the ordinary streptococci with which we are commonly familiar, except perhaps in the matter of virulence.

The work of Capps and Miller concerning the relation of this epidemic of sore throat to the milk-supply opened a field for bacteriologic investigation along the lines of milk contamination. The facts which they obtained indicated clearly that the epidemic was milk borne and that the infected milk came from one particular dairy (Dairy X) which obtained its milk-supply from the territory about Batavia, Ill. Furthermore, it was shown that an unusual number of cases of mastitis occurred in the dairy herds in this region during the winter and associated with the mastitis were many cases of sore throat in the families of those who owned the herds. As was shown, however, the latter infections were usually preceded by the appearance of the mastitis in the cows. Unfortunately, the epidemic had long passed before the investigation had pointed to the possibility of this region being the source of the trouble. There still occurred in May, occasional cases of mastitis in the herds though nearly all were old chronic lesions or lesions practically healed. It was thought that one might possibly throw some light on the nature of the causative organism by an examination of milk from the udders of cows so affected.

Ten cows on seven different farms in this territory were found which during the past few weeks or months had udder disease in some form. Only four of these, however, had lesions which could be considered active. They were all on farms supplying milk to the dairy under suspicion. Three of these cows, all giving gargety milk, had been suffering for a long time, some indeed for four or five months. They were on three different farms at considerable distances apart. In the milk of each of these cows was obtained a practically pure growth of a small Gram-positive bacillus which undoubtedly belonged to the diphtheroid group. They occurred in large numbers in the ropy milk together with many pus cells; in one cow, they were also found in the pus from an abscess which had broken open on one of the udder quarters. This organism is pathogenic for guinea-pigs in moderate doses but does not produce in the guinea-pig hemorrhages in the adrenals or other lesions which simulate those caused by the diphtheria bacillus. No streptococci were found in any of the samples from these three cows. A fourth cow, in another herd, had a diseased udder for four or five weeks which appeared shortly after calving. The right hind quarter was hard and somewhat tender, and thick, ropy milk or rather pus was obtained from the teat. According to the farmer, this diseased quarter was milked on the floor, the milk from the other three quarters being used. On a subsequent visit one week later, three quarters were found affected, all of which were caked, and the milk was ropy and stringy. The farmer still continued to use one quarter. On examination smears made from the affected milk on both occasions revealed myriads of streptococci and pus cells in immense numbers were also found in the material. Cultures made on blood-agar plates revealed a pure growth of streptococci from all the affected quarters.

The streptococcus at the time it was isolated conformed in every way morphologically and culturally with the ordinary hemolytic streptococcus. It was Gram positive, distinctly hemolytic, grew in moderately short chains, acidified milk and did not possess a capsule. It fermented dextrose and lactose but not raffinose or mannite. One blood-agar slant growth injected intravenously into a rabbit caused purulent arthritis of the left knee and death on the fourth day from septicemia. Guinea-pigs succumbed usually in twenty-four hours after intraperitoneal injection of the same amount. An interesting point is the fact that after three animal passages the cocci in the peritoneal exudate of the guinea-pigs acquired distinct capsules and their growth on blood-agar slants and plates became more watery and mucoid. These properties were again readily lost on ordinary media. In other words after animal passage it simulated in every respect the encapsulated streptococci described above in the exudates of the epidemic cases. Before animal passage it simulated the hemolytic streptococci commonly found in the sore throats.

It might be stated also that on this same farm one member of the family, a young girl, was suffering at the time and for about the last five weeks with sore throat, associated with acute articular rheumatism. Swab cultures from the inflamed and enlarged tonsils gave an abundant growth of a hemolytic streptococcus which seemed to be identical with the milk streptococci. On animal passage it readily acquired capsules. This girl, however, denied having drunk any milk and gave a history of having had acute arthritis and sore throat in previous years. It may be that there existed no relation in this instance, but the circumstances at least seemed suspicious.

So far as could be learned, this case of mastitis was a typical one and clinically was like the infections which were so prevalent in this region throughout the winter. I therefore think it reasonable to assume that at least some of these cases occurring during the winter were also streptococcal in origin.

It was stated above that a number of outbreaks of sore throat occurred in families of the owners of herds affected with mastitis. In some instances the milkers were severely ill and continued to milk the cows reg-

2. Jour. Infect. Dis., 1907, iv, 426.
3. Ztschr. f. Immunitätsforschung u. Exper. Therap., 1, Teil; Orig., 1912, xii, 199.

ularly. It may very well be that in some cases the milk was again contaminated by such infected milkers through coughing, sneezing, handling, drinking from milk-cans and the like. Drinking fresh milk from cans or can covers in the barns was found to be a common custom of milkers on some farms. One farmer who was obliged to insert a tube into the teat, following mastitis, in order to empty one quarter of the udder admitted that he put the tube regularly in his mouth to blow out the contents and never cleaned the tube otherwise. This same farmer admitted too that only a short time previously he had had sore throat for several days but paid little attention to it and continued to milk his cows as usual. It is difficult to prove how much contamination actually does occur under such conditions or indeed whether any at all occurs, but surely one must admit that the possibilities are ample. It seems, therefore, not unlikely that assuming that the epidemic was chiefly caused by the prevalent mastitis in the cows, the milk contamination was further increased through carelessness.

The literature on the subject of mastitis in cows in certain respects is somewhat confusing. Authors quite generally agree that milk from such cows is dangerous and that many of these infections are caused by streptococci. As to the character of the streptococci, however, there is much difference of opinion. The question is confused owing to the fact that normally in milk there are found many cocci which come from the ducts, skin of the udder, fecal dirt, etc., and which may possess some pathogenic power for animals. As shown by Heinemann[4] and others, *Streptococcus lacticus*, which was formerly mistaken for a bacillus, has some pathogenicity for lower animals and is very similar in many respects to the ordinary *Streptococcus pyogenes*. Ruediger[5] in a recent study maintains, however, that the *Streptococcus lacticus* can readily be differentiated from *Streptococcus pyogenes* by means of blood-agar plates, the former organism producing green or grayish colonies with little or no hemolysis, while the latter produces a wide clear zone of hemolysis about the colonies. He also states that "*Streptococcus lacticus* has no sanitary significance as it is found in nearly all samples of clean, soured or fresh milk and often in the healthy milk ducts. *Streptococcus pyogenes*, on the other hand, seems to occur but rarely in milk and is indicative of the existence of an inflamed condition of the udder of the cow furnishing the milk." This I regard as undoubtedly an accurate expression of the relation of these organisms.

That epidemics, especially of tonsillitis, can be caused by milk from infective mastitis in cows there is little doubt. Winslow[6] and Savage[7] have recently analyzed the literature on this subject and it is not necessary here to repeat further than to make some general remarks. In many respects the Boston epidemic of sore throat last year was similar to the Chicago epidemic, especially in its clinical manifestations. The evidence seems clear that the milk-supply was contaminated, but the exact source of the infection was not clearly determined. I may state that through the kindness of Dr. Fabyan of Harvard I obtained four strains of streptococci isolated from human patients during the Boston epidemic and they appear in every respect to be identical with the Chicago streptococci. They readily form capsules when passed through animals and show a profuse moist growth on blood- or serum-agar.

4. Jour. Infect. Dis., 1907, iv, 87.
5. Science, 1912, xxxv, 223.
6. Jour. Infec. Dis. 1912, x, 73.
7. Savage, W. G.: Milk and the Public Health, London, Macmillan & Co., 1912.

Epidemics of tonsillitis bearing a more or less definite relation to the milk-supply have been common in Great Britain. Usually the exact connection is not clear, but especially in three epidemics the evidence in favor of udder contamination is very strong. At Colchester[8], for example, in 1905, an explosive outbreak appeared which was confined almost entirely to persons supplied by a single dairy in which was found a cow suffering from a streptococcal mastitis. On removal of this cow the epidemic ceased. Again at Glasgow[9], in May, 1904, an epidemic of sore throat appeared suddenly and it was found that some cows in the dairy supplying milk to the hospital were suffering from a teat eruption which also appeared on the hands of four of the milkers. An epidemic also at Woking[10], in 1903, was typical and was associated with many serious complications. The source of the infection was traced to a farm on which four cows were affected with streptococcal udder inflammation. The farmer and his family were suffering at the time, or had suffered previously, from sore throat. The streptococci were virulent for mice.

CONCLUSIONS

The epidemic of sore throat in Chicago in the winter of 1911-12 was caused by an organism belonging to the streptococcus group. In the exudates and in the body it was usually encapsulated, but not infrequently in the throats a capsule was not present. It was highly pathogenic for animals, readily producing arthritis in rabbits, and occasionally, endocarditis. The work of Capps and Miller shows clearly that the infection was largely milk-borne and that an epidemic of mastitis in cows and sore throat in farmers prevailed during the winter in the vicinity of Batavia, Ill., the territory which supplied the contaminated milk. From a typical case of mastitis in a cow from a farm in this region a streptococcus was obtained pure which was pathogenic to animals, became encapsulated on animal passage and agreed in all essential respects to the human epidemic streptococcus. A coccus identical in morphology in culture and in pathogenicity was obtained from a human case of tonsillitis and arthritis on the same farm. The relation of these streptococci to the common hemolytic variety, *Streptococcus pyogenes*, is certainly very close. They may be identical, the differences noted being caused by environmental factors. The fact should be emphasized that streptococci which cause mastitis in cows may be pathogenic for animals and virulent to man.

[THE DISCUSSION ON THIS AND THE PRECEDING PAPER WILL APPEAR NEXT WEEK.]

8. Savage, W. G.: Public Health, 1905, xviii, 1.
9. Chalmers: Public Health, 1904, xvi, 769.
10. Pierce: Jour. State Med., 1904, xii, 595.

Sewage-Polluted Water-Supplies in Relation to Infant Mortality.—Contact is probably one of the greatest factors in the transmission of diarrhea and enteritis. It is also the factor responsible for the persistence of the disease from year to year. In the winter the contact factor is reduced, but operates at a low rate which increases in the hot months. Flies and other factors augment the increased rate due to contact in the hot season. It is because of the contact factor that the breast-fed infant does not escape. The greatest prevalence in bottle-fed babies is probably due to greater opportunities for infection. Young infants drink little water, and the effect of polluted water on infant mortality is probably most active through being mixed with milk.—Allan J. McLaughlin in *Public Health Reports*.

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MORPHINISM IN SOME OF ITS LESS COMMONLY NOTED ASPECTS

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In this communication I shall touch briefly and somewhat empirically on certain conclusions arrived at as a result of my work with the morphinist. Some of these, I believe, are not generally noted in writings on the subject of drug habit. In dealing with the morphinist, we find an individual very different from the alcoholic. For while we may fall back on the neuropathic constitution to explain many cases of alcoholism, if we attempt to apply the same argument in morphinism it will be found not to work in nearly so many instances. Unlike the poet, the morphinist may be made, not born such; there need be neither special neuropathologic constitution nor hereditary taint. I am inclined to say that some neurotic element is necessary for the evolution of the well-developed inebriate; but this original, native nervous feature is by no means always present in the morphinist; it is not essential for his maturing.

The average individual can take alcohol in ordinary doses for long periods and still maintain his independence; no individual may do this with morphin. It is not a rare occurrence for an alcoholic of some length of habit to take a brace and the pledge and remain sober ever after. But after a corresponding period with morphin — a period much less in point of duration — it is almost unheard of that an habitué is able voluntarily to break away from his habit. The physiologic and psychic effects of the two drugs are very different. Morphin begins to leave distressing bodily and mental withdrawal-symptoms after a very short period of continuous usage — a period often of but a few days. Cramps, nausea, a feeling of drawing and pulling about the joints, and an indescribable sense of general discomfort begin to make their appearance; and frequently it is the desire to escape these that enables the drug to get its first firm hold.

In the study of morphinism the question naturally arises as to how the organism can adapt itself to the large doses individuals often habitually take. Perhaps the idea is rather prevalent of regarding idiosyncrasy as referring to a peculiar susceptibility to small doses of a drug. But we have to bear in mind that the term "idiosyncrasy" applies as well when an individual requires more than the ordinary dose to obtain a reaction. It is to an acquired tolerance that I wish to call attention rather than to this congenital tolerance, or idiosyncrasy. It is not uncommon for a morphinist to take 2, 4, 6, 8 and even 10 grains of morphin hypodermatically at a dose. One of my patients had been taking, for a month or six weeks, 25 grains daily by the needle. Another frequently took 60 grains daily by mouth. One woman was accustomed to inject daily one hundred 1/6 grain heroin tablets for some time before she underwent treatment. Such examples serve to illustrate to what extent tolerance may grow. Reid Hunt[1] quotes Faust as finding that the establishment of tolerance for morphin is accompanied by an increased power on the part of the organism to destroy (oxidize) morphin; and he attributed the tolerance to this power of increased oxidation. Hunt found, by experiments on animals, that tolerance for alcohol was due to this same increased power of oxidizing the drug.[1] Arguing that there would probably be an increased tolerance for other drugs belonging to the same chemical group as that of the tolerated drug, Hunt found that certain animals, while on small doses of alcohol, acquired the power of oxidizing a definite poison, acetonitril. This is in accord with what one notices in the morphin habitué.

We all know how recklessly certain drug addicts dose themselves with the various narcotics; these practically all belong to the same chemical series, namely, the methane series including alcohol and chloroform. The addict appears to become tolerant of unusually large doses of any member of this group. I have become accustomed, by necessity, in treating these cases to administer hypnotic doses which would neither be given nor required in the normal individual. Just as we account for the fact that chronic drunkards are particularly resistant to the action of chloroform, so the above conditions of tolerance are partly explained by the fact that many of these act on the same nerve-cells in the same direction, and probably produce the same changes in the protoplasm.[2] At the same time, I believe that part of the increased tolerance is due to the fact that the nerve-cell has become exhausted from continued reaction and the accumulation of waste products, and for these reasons calls for a continued increase in dosage to bring about an adequate reaction. On the other hand, tolerance is sometimes aided by the action of antagonistic drugs. One of my patients took her morphin in ¼ grain doses each combined with 1/150 grain of atropin. She was using from 20 to 30 quarters daily; therefore, from 1/7 to 1/5 grain of atropin during the same time. Here the tolerance for each drug was enhanced by the other. I will cite one further instance which seems to have a distinct bearing on the subject of tolerance. A morphinist of long standing arrived at the stage where, as he put it, "I got hell when I took it and worse hell when I tried to leave it off." After months of this blind-alley misery, he decided to end the struggle. Having heard that strychnin was a deadly drug, he procured one hundred 1/40-gr. tablets, and counting out forty of them at bed-time lay down, as he thought, to his last long slumber. In the morning he was disappointed to find himself awakening as usual; but undaunted he gulped down the remaining sixty the next evening. Then awakening the next morning, even a little refreshed, he abandoned the effort with a contemptuous regard for strychnin.

A phase of drug habit worthy of observation is the relationship of alcoholism to morphinism. I have seen it stated that delirium tremens is sometimes caused by the use of morphin. There is no doubt that hallucinations and delusions may arise as a result of the use of morphin; but when they so arise they certainly do not, in my experience, bear the stamp of the alcoholic delirium. Whenever a typical delirium tremens has arisen in my cases, I have always been able to find a history of alcoholism. In one case a delirium tremens occurred during the withdrawal of morphin. But, though the patient had been abstinent for several weeks, alcohol had been taken steadily and copiously before this. The mania *a potu* arose as it would have arisen in a fractured bone; the withdrawal of the morphin corresponded to such a trauma. A similar case was that of a young man, a morphinist, who developed a delirium during a pneumonia. His pneumonic symptoms did not seem sufficient to warrant the delirium, and at first the

1. Studies in Experimental Alcoholism, U. S. P. H. and M.-H. S., Bulletin No. 33, p. 12.

2. Cushney: Pharmacology and Therapeutics, Lea & Febiger, Philadelphia, 1910, Ed. 5, p. 29

morphin was suspected. But his delirium being typically one of alcohol, further inquiry was made and it was found that the man had been drinking for some time, especially hard just previous to his illness. In men it is common to find this devotion to both morphin and alcohol. I have had patients whose morphinism was begun by its administration for the nervousness following an alcoholic debauch. When the morphin has been once begun the alcohol is almost invariably dropped. Thereafter, if the alcohol be resumed there is usually an alternation of devotion, but the veteran habitué rarely uses the two drugs simultaneously.

A bypath of interest in working with the morphinist is the study of the difference in effect on the sexes. I do not know that the incubation period for the formation of the habit is shorter in women, but they usually quickly outstrip the male in the amount of the drug being used. The man is more provident in the use of his newly found treasure; he calls on its resources more cautiously. The woman is more reckless; she tolerates less patiently any failure in her dosage to produce all its first charm, and rapidly increases the amount in order to obtain her original relief. Constitutional and psychic differences, dependent on difference in sex, must be advanced to explain such differences of reaction. But there is one very important respect in which the drug affects both men and women in much the same way. This is the matter of the reduction of the libido. Amorousness subsides and is lost altogether in many instances. There are individual variations in this as in other symptoms which arise. Impotence and sterility are accompaniments of this sexual indifference. A feature especially noticeable in women is that shortly after the withdrawal of the drug there is a rather tumultuous return of sexual feeling. In women we find frequently a cessation of menstruation and an atrophy of the breasts. These return to normal when the morphin is discontinued. A point worth noticing here is that if a woman taking morphin in large amounts bears a child, the child is apt to be seriously dependent on the immediate continuance of the drug. Having obtained it through the mother's blood, he must now have it to prevent death from heart collapse. A case came to my notice lately in which such an outcome seems without doubt to have occurred.

A peculiar psychic condition exists in the drug addict which, I believe, is not always recognized. An amnesia may arise in the user of opium similar to that seen in certain alcoholics. One of my patients was for three weeks in such a state, having passed during this time through a particularly distressing period of withdrawal. To all appearances her suffering was intense at times; but at the end of the three weeks she gave no evidence of remembering the incidents or discomfort through which she had passed. It seems intelligible to regard this phenomenon as a result of a splitting of consciousness; and I am satisfied that in this particular instance, the memories which constituted the personality who reigned for the three weeks were a grouping of all the patient's most objectionable associations, traits and reflexes. Normally this woman was docile, sweet-tempered and immaculate as to person and habits; during this amnesic state she was intractable, vicious and filthy in her habits. Allied to such clear-cut phases of memory groupings with resulting amnesia, we find lesser phases of the same condition evidenced in such expressions as: "Doctor, I am just beginning to see things right again; everything appears so different to me now. I feel as if a veil had been drawn off my brain." Such expressions may not be heard for weeks after the withdrawal of the drug. Here the clouding of consciousness has not proceeded to the extreme of a splitting off, but I have interpreted it as due to a similar but slighter mechanism.

One of the practical conclusions which these amnesic or clouded states continuing after withdrawal has forced on me is the necessity of keeping patients under the strictest surveillance and best hygienic conditions until their mental clearness and character-assertiveness have manifestly returned. I would like to emphasize the fact that, almost invariably, clouding of consciousness still persists, though the morphin has been withdrawn, continuing sometimes for weeks, or until physical rehabilitation has taken place. The fact that this clouding, or amnesia, exists and persists must be taken into account if we expect permanent results in treating morphinism. I regard this fact as an irrefutable argument against the possibility of success, in the majority of cases, with any "three-day" or set-time cure.

As to symptoms of withdrawal, we find a great similarity running through the majority of cases. The word "cramps," I suppose, is used more than any other by the patients to describe what they feel when the drug is being withdrawn, or immediately after its withdrawal. These may be in the abdomen, low down, or in the stomach. More frequently the legs suffer — the calves, or the region about the knees. Distress in the back is often spoken of. Wherever the distress may be in the early stages of withdrawal, it rarely fails to be most prominently felt, and for the longest time, in the legs. This fact may be accounted for in the same way in which we explain the action of the virus of syphilis; namely, that it affects most prominently that part of the nervous system which is subjected to the most usage; and as we get tabes and paresis from syphilis, so the poison of morphin affects the lower spinal centers and higher brain processes most prominently. As in alcoholism or syphilis, so in morphinism we see on the mental side the most lately acquired faculties affected first. It is often the long-lasting withdrawal-symptoms and not a craving for the drug which brings about relapses. Even though the craving be removed, if these sequelæ be not properly cared for and the individual physically restored, the danger of relapse is great. This is readily understood because the memory of the relief which the drug gave has not been and cannot be abolished. Strength of character has to be truly herculean to resist further resort to the drug under the distressing withdrawal-symptoms which often arise.

The Canal Zone and the Health Officer.—That the Canal Zone has been transformed from a pestilential region into one comparable with the United States in healthfulness has served as a text for every writer and lecturer on sanitation for several years. Yet we seem slow to see here a suggestion that this victory, won almost solely along the line of sanitary inspection of the modern type, has a lesson for us all. Similarly, the great results obtained in Havana and New Orleans seem to have been accepted by municipal health officers as classic instances of notable achievements in sanitary science rather than as examples of what we ourselves should be doing; and as fine material for our boasts from the platform rather than as an irresistible incentive to work along similar lines—modified, of course, to suit our own respective communities—and thereby secure for them, not the conquest of impending disaster of colossal proportions, but a large measure of relief from constant needless sacrifice of human life, which in the aggregate exceeds every year any loss of life which even the most fatal of yellow fever itself has ever occasioned.—Levy in *Am. Jour. Public Health*, January, 1912.

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SIMPLE DEVICE FOR HOLDING RETENTION CATHETER

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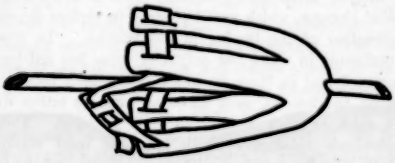
The finger of a thick rubber glove is divided lengthwise into four parts, up to about ½ inch of the tip. One-eighth inch from the end of each strip a slit about ⅝ inch long is made. A very small hole is made in the center of the tip through which the catheter is to pass.

From some other part of the glove is then cut a strip, 5 to 6 inches long, and ⅝ inch wide except at one end which is ½ inch wide and has three slits cut crosswise, through which the other end is passed after having been threaded through the four strips of the first piece. This can be drawn fairly snugly behind the corona and will hold the catheter in position.



It can be made in about a minute and has the advantage over the adhesive straps in that it can be removed, tightened or loosened without trouble to the physician or discomfort to the patient.

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ACRANIAL MONSTER WITH ENCEPHALOCELE AND POLYHYDRAMNIOS

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While a number of cases of a teratocephalic fetus are reported in the literature, I find none with an associated hydramnion of this size. I am also desirous of bringing out a point in regard to this case which I have not seen mentioned, and which may well be borne in mind in dealing with hydramnion, i. e., in making a digital examination through a small cervix, care should be taken not to mistake an encephalocele with acrania for placenta prævia. Edgar states that hydramnion is associated with monsters in 10 per cent. of all cases.

History.—The patient, a woman aged 38, was always healthy and had had six previous pregnancies without dystocia. Her family history was negative. I saw the patient June 10, 1911, at 11 p. m. She was eight and one-half months pregnant and had had pains for thirty-six hours, which had not become severe until 6 p. m. At the onset, the pains were an hour apart and lasted from ten to twenty minutes. Patient said that the pains came on so slowly that she could not tell when they started or ended. This continued for twenty-four hours, when the pains became more severe and the uterus continued in a state of tonic contraction. At irregular intervals there was an acute exacerbation of her pains, but at no time since 6 p. m. had they "let up." Previous to my arrival she had been under the care of a midwife.

Examination.—External: After catheterization, I found an immensely pendulous and distended abdomen, and palpation revealed nothing relative to fetal parts except the possibility of a cephalic presentation. Internal: This revealed a well-effaced cervix and an os admitting one finger. Completely covering the os was a "placenta-like" structure. Palpation through the effaced cervix revealed the bony structure of the fetal head above the pelvic brim. With threatened rupture of the uterus and the patient becoming rapidly exhausted, I decided on immediate delivery.

Delivery.—I had the patient anesthetized and prepared for manual delivery, the cervix yielding readily to manual dilatation. Careful examination revealed the fetal membranes between the examining finger and the placenta-like structure which proved to be an encephalocele. On rupturing the bag of waters, quantities of amniotic fluid rushed out and collected. Slight traction brought forth a dead fetus. The amniotic fluid collected measured exactly 24½ quarts. An adherent placenta was removed and the patient made an uneventful recovery.

Description of Fetus.—The trunk and extremities were normal. The cranium showed an encephalocele, covered by a thin transparent membrane, and absence of the occipital and both parietal bones.

New and Nonofficial Remedies

THE FOLLOWING ADDITIONAL ARTICLE HAS BEEN ACCEPTED BY THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION. ITS ACCEPTANCE HAS BEEN BASED LARGELY ON EVIDENCE SUPPLIED BY THE MANUFACTURER OR HIS AGENT AND IN PART ON INVESTIGATION MADE BY OR UNDER THE DIRECTION OF THE COUNCIL. CRITICISMS AND CORRECTIONS ARE ASKED FOR TO AID IN THE REVISION OF THE MATTER BEFORE PUBLICATION IN THE BOOK "NEW AND NONOFFICIAL REMEDIES."

THE COUNCIL DESIRES PHYSICIANS TO UNDERSTAND THAT THE ACCEPTANCE OF AN ARTICLE DOES NOT NECESSARILY MEAN A RECOMMENDATION, BUT THAT, SO FAR AS KNOWN, IT COMPLIES WITH THE RULES ADOPTED BY THE COUNCIL.

W. A. PUCKNER, SECRETARY.

BISMUTH BETA-NAPHTHOLATE.—Bismuthi Beta-Naphtholas.—Bismuth beta-naphtholate, a bismuth salt of beta-naphthol.

Bismuth beta-naphtholate occurs in the form of a brownish or grayish powder without odor, almost tasteless and insoluble in water. It is slightly soluble in alcohol.

One to 2 Gm. of bismuth beta-naphtholate is shaken in a separator during one hour with 25 Cc. of chloroform and 25 Cc. of concentrated hydrochloric acid, and then 50 Cc. of water added and the mixture again shaken. The chloroform solution is then drawn off and the acid mixture extracted with three more portions of 10 Cc. each of chloroform and the combined extracts evaporated and dried to constant weight over sulphuric acid. A residue should remain, weighing at least 15 per cent. of the material used, which should respond to tests of identity for beta-naphthol.

If bismuth beta-naphtholate be examined as given below the bismuth oxide found should weigh not less than 60 per cent. of the material taken.

The acid solution from which the naphthol has been extracted is transferred to a beaker, diluted to 200 Cc., heated to boiling, ammonia water added till turbidity appears, then sufficient hydrochloric acid to clear up the turbidity, and then 50 Cc. of 10 per cent. ammonium phosphate solution is added to the boiling liquid. The precipitate is allowed to subside, the clear liquid decanted through a tared porcelain Gooch crucible, the precipitate washed with hot water by decantation and finally transferred completely to the crucible. The precipitate and crucible are dried, placed in a nickel crucible, and exposed to the full heat of a Bunsen flame till the weight is constant. The weight of the resulting bismuth phosphate multiplied by 0.6869 should yield a figure (representing bismuth, Bi) equal to not less than 60 per cent. of the material taken.

If bismuth beta-naphtholate be examined as given below the weight of residue should indicate not more than 1 per cent. of matter soluble in chloroform.

One to 2 Gm. of bismuth beta-naphtholate is weighed to a small asbestos plugged percolating tube, 5 Cc. of chloroform added, the mixture stirred by means of a glass rod, and allowed to percolate into a tared dish. When the liquid ceases to drop, a further portion of 5 Cc. of chloroform is poured into the percolator and also allowed to percolate into the tared dish. The stem of the percolator is washed with a little chloroform, and the combined washings and percolates allowed to evaporate spontaneously and the residue brought to constant weight over sulphuric acid. The residue should not exceed 1 per cent. of the material taken.

Actions and Uses.—Bismuth beta-naphtholate is decomposed into its constituents in the intestines, where it exerts the effects of bismuth salts and of beta-naphthol. Hence it is used in catarrhal and fermentative gastro-enteric disorders, such as gastritis, dysentery, diarrhea, etc. (See note under Betanaphthol Benzoate).

Dosage.—For children 0.1 to 0.3 gm. (1½ to 5 grains) and for adults 1.5 to 5 gm. (22 to 75 grains) daily.

A mixture of beta-naphtholate with acacia should be avoided as a viscid precipitate rapidly becoming hard is likely to be formed.

Non-Proprietary Preparations:

Bismuth Beta-Naphtholate, Mulford.—Bismuth beta-naphtholate, Mulford, is bismuth beta-naphtholate obtained by precipitating a solution of sodium beta-naphtholate with an acetic-acid solution of bismuth nitrate, with addition of sodium hydroxide solution.

Manufactured by H. K. Mulford Co., Philadelphia. U. S. patent 985,559 (Feb. 28, 1911; expires 1928). Not trademarked.

Tablets Bismuth Beta-naphtholate, Mulford 5 grs.—Each tablet contains bismuth beta-naphtholate, Mulford, 0.3 Gms. (5 grains).

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

535 DEARBORN AVENUE . . . CHICAGO, ILL.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

[*For other information see second page following reading matter*]

SATURDAY, JUNE 15, 1912

ANURIA AND THE KIDNEY EPITHELIUM

The correlation between the structure and the function of a tissue or organ is a theme which frequently has not received the attention which it deserves. In the domain of pathology there has too often been a tendency to determine the gross or minute anatomy of a part more for the sake of the morbid "picture" which was presented than in recognition of the light which changed histologic features might throw on the perversions of function involved — on the so-called pathologic physiology of the tissue. There are few organs which present more extensive alterations of activity than the kidneys. The physiologist at once notes the effects of pathologic changes in these organs on the composition and output of the urine. He is likely to concentrate his attention on the strictly chemical or circulatory disturbances. The pathologist examining the minute structure of the diseased kidney forgets, for the time, the bearing of these histologic changes on the excretory work of the organ. Finally, the clinician extends his observation to even more far-reaching effects and notes symptoms of renal disease remote from the kidneys themselves. The ideal attitude is one which unites these diverse points of view into a harmonious interrelationship.

An interesting suggestion of what may be gained by such a comprehensive consideration is offered in MacNider's studies on nephritis.[1] Recognizing the disproportion in the relative importance attributed by various clinical and experimental observers to the vascular and the epithelial changes in leading to a condition of anuria, MacNider has attempted to ascertain carefully to what extent the total output of urine may be correlated with changes in the renal epithelium, especially those of an obstructive nature. Heretofore the most consideration, perhaps, has been devoted to the part played by the vascular or glomerular factor. As MacNider says, "one fact is certainly established, that whatever urine there is formed makes its exit from the kidney by passing through tubules lined by epithelium, and that this epithelium, colloidal in nature, is competent to swell and partly or completely block the channel through which the urine is passing." Hence the desirability of further study of the tubular changes in anuria.

The outcome of these investigations on experimental acute nephritis induced by the use of diverse chemical agents, such as chromate, arsenate, uranium salts and cantharidin, emphasizes the significance of degenerative alterations in the tubules in blocking the passage of urine and leading to suppression of the secretion. The study indicates that in the experiments which show either a pronounced decrease in the output of urine or an anuria, there have constantly been associated epithelial changes, which would produce in various degrees obstruction of the lumina of the tubules. "In those experiments in which the output of urine has not been decreased and in those in which it has been increased beyond the normal, such epithelial changes either did not exist or they were histologically slight. Those nephrotoxic substances which have the most marked affinity for the tubular epithelium are the substances which most rapidly cause either a reduced output of urine or anuria, while those nephrotoxic substances, such as arsenic, which cause an early and a pronounced vascular injury, with late epithelial involvement, are the poisons which have least tendency to produce an anuria." In the instances in which polyuria has arisen, as occurs often in the early stages of nephritis, the vascular changes present constitute the sole anatomic evidence of altered function.

The results of obliteration of the lumina of the kidney tubules are conspicuous experiences of daily practice. It is helpful to have these interesting investigations, free from the element of surmise so often attending clinical deductions relative to kidney pathology and based on the more convincing evidence of carefully controlled animal experimentation.

1. MacNider, W. deB.: A Study of the Renal Epithelium in Various Types of Acute Experimental Nephritis and of the Relation Which Exists Between the Epithelial Changes and the Total Output of Urine, Jour. Med. Research, 1912, xxvi, 79.

THE TEETH AND THE SKULL

It occasionally happens that physiologic forces which are active in the organism are not adequately recognized until some pathologic condition makes their normal presence suspected. The teeth are ordinarily looked on merely as organs for mastication exerting a purely local influence in the mouth and unsuspected as agents whose proper development is of considerable significance for the growth of the entire skull. In the course of the development of the teeth within the jaws from their delicate beginnings as tooth-sacs until their final evolution into perfect dental organs they must inevitably be demanding more and more room and accordingly be exerting a certain degree of tension or pressure on the parts within which they are growing. Does this expansion exert any directive influence on the development of the jaws as a whole, or is the evolution of the teeth merely a localized incident in the changing form of the jaws with the progress of age? The question is one which is amenable to experimental treatment. Dr.

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Landsberger of Berlin has watched the effects produced by the extirpation of the tooth-sacs of both the permanent and the milk teeth before they have developed sufficiently to exert any influence on their bony environment.[1] In this way he was able to distinguish between the inherent growth impulse in the jaws themselves and the possible contribution of the teeth to the contour and enlargement of the bony parts.

Such extirpations of the tooth-sacs, made on young dogs, were always undertaken on one-half of the jaw, so that comparisons could be made with the side unoperated on. An entire year was allowed to elapse before the skulls were prepared for examination. The changes observed were typical and constant. The direction of growth in the jaw was always altered so that a twisted or one-sided effect difficult to describe adequately in words was obtained; there were also evidences of inadequate development in certain parts of the bony skull; and a marked hypertrophy of certain parts about the nostrils was prominently in evidence.

The "twist" in the upper jaw occasioned by the absence of growing teeth calls for some comment. With the lack of tension or pressure ordinarily exerted by the developing tooth-sacs on one side, nothing interferes to oppose the strain on the other side. A distortion of skeletal form ensues as a consequence. This does not make itself manifest on the lower jaw, because it is equalized by the movability of the attachments of this part.

The interference with the well-proportioned development of the skull as a whole—a distortion in the vertical direction of the half operated on and a spreading in a horizontal way of the side not operated on—points to influences on growth exerted far beyond the immediate locality of the teeth. This unanticipated interruption of perfect skull development as the result of imperfect organization of the teeth may have wider import for medical problems than appears at first glance. If, as Landsberger remarks, improper development of the teeth can influence the skull in a pathologic way, as these animal experiments clearly indicate, it is not beyond the bounds of reason to suppose that the brain functions may also become involved more or less. Nervous upsets associated with the difficulties of dentition are not unknown in practice; and the apparent correlations between teeth and skull may have a bearing for both the psychiatrist and the rhinologist. Traction devices applied by dental surgeons in cases of defects in dental development are reputed to have improved both the mental and physical condition of children.

Perhaps we have, in the past, failed to recognize the importance of the growing teeth in lending appropriate stimulus to the correct anatomic development of the head. Stomatology must become an experimental science — something more than an odd-sounding name of vague import.

1. Landsberger, R.: Der Einfluss der Zähne auf die Entwicklung des Schädels, Arch. f. Physiol., 1911, p. 433.

THE PROBABLE CAUSE OF BERIBERI

At the recent meeting of the Far Eastern Association of Tropical Medicine at Hongkong, an entire day was devoted to the consideration of beriberi, and in view of the numerous contributors to the subject, the views concerning it were so nearly unanimous as perhaps to occasion surprise. Americans, English, French and Japanese presented the results of their work, and with one exception all endorsed the theory of the dietetic, as opposed to the infectious, nature of its origin.

Following the work of Frazer and Stanton, to which we referred some time ago,[1] a number of investigators have busied themselves with the study of the alcohol-extractible matter in rice-polishings, which in the hands of the former had sufficed to prevent the peripheral neuritis of fowls. Much of the work consisted of investigations of the chemical character of this substance, and in no case was it found possible to isolate it with certainty; indeed, some diversity of results was found in regard to its precipitibility, and it is to be assumed that little definite progress has been made along this line. Working from the clinical side, however, Chamberlain and Vedder reported the results of the administration of rice-polishing extract to children nursing from mothers suffering with beriberi. Such children, it has been found, become ill with a disease somewhat resembling the beriberi of adults, but chiefly characterized by the occurrence of dyspnea and tachycardia, and sometimes terminating fatally. When these infants were given small doses of the extract, rapid amelioration of their symptoms was observed, not infrequently progressing to complete recovery. Unfortunately, it has so far been impossible to find any efficient and innocuous preservative for the extract, which in the climate of Manila undergoes rapid decomposition. Work on adults, therefore, could not be reported.

The suggestive character of these results, taken in conjunction with the work of Fraser and Stanton, would seem to demonstrate almost decisively the importance of rice-polishing in the causation of beriberi. But on the other hand, a paper presented by Davis of Shanghai, and based on observations by the health department there, lent strong evidence toward the infectious theory of the disease. Summarized briefly, his facts were as follows: Prisoners in the Shanghai jail at one time suffered severely from beriberi, which diminished, it is true, with a change in diet, but again reached a high figure when the improved sanitary conditions due to coincident occupancy of a new jail had in time deteriorated. When steps were taken to overcome infestation with vermin, notably bedbugs, the incidence of the disease again diminished markedly. Similarly, one squad of native Shanghai policemen showed a high morbidity with beriberi, which disappeared when their quarters were rid of bedbugs. Unfortunately, in this latter case

1. The Etiology of Beriberi, THE JOURNAL A. M. A., Oct. 7, 1911, p. 1213

no satisfactory account was obtained of the dietary of the patients, so that this factor cannot be eliminated as in the former. To these facts may be added the occurrence of epidemics of peripheral neuritis in restricted geographical areas in and about Shanghai, where the native diet varies little from one quarter to another, and where polished rice is supplemented quite largely by other foods. Of course, no accurate conclusions can be deduced from a report of this character, but it must be admitted that it apparently indicates the necessity of further work, particularly along lines of animal experimentation, in ruling out an infectious origin for some cases of oriental peripheral neuritis. The view is by no means new that by beriberi we at present describe more than one disease, and it is perfectly conceivable that while true beriberi is purely dietetic in origin, there may be another disease so closely simulating it clinically as to be indistinguishable.

In view of the preponderance of evidence in favor of the dietary cause of beriberi, resolutions were brought before the association to the effect that legal restrictions be recommended on the sale of polished rice containing less than 0.4 per cent. of phosphoric anhydrid, it having been found that this substance gives an index of the safety of rice for consumption, although not itself the factor of importance. After much debate, however, it was decided that, for the present at least, such a measure, implicating as it would the principal food of millions of people, would be inadvisable, and the congress finally adopted a resolution simply endorsing the dietetic theory of the causation of the disease, and recommending international action toward its suppression.

THE DISEASES OF THE EARLY EGYPTIANS

On several previous occasions we have referred to the interesting studies on the pathology of ancient Egypt, as disclosed by the studies of mummies and skeletons from tombs and excavations which are being made in the medical school at Cairo, especially by Drs. Elliott Smith and Marc Armand Ruffer.[1] These have disclosed many points of identity of the diseases of from two to four thousand years ago and the diseases of the present day, as well as noteworthy differences. Renal and vesical calculi were common, and evidence of bacterial infections has been made out in some bodies. Malignant disease, gout, leprosy, infantile paralysis and appendicitis seem to have existed in the days of the Pharaohs, while arteriosclerosis was common then as now.

An extensive study of a large collection of osseous remains is now reported by Ruffer,[2] this material being, of course, the most abundant and most satisfactory of all for historic study. The most striking result is the confirmation and amplification of the previously demonstrated fact that arthritis deformans was remarkably prevalent in the Nile valley, both during the earliest times and also in the Roman period, about 200 A. D., and later. That is, the skeletons of persons dying in Egypt during a period of more than three thousand years very commonly show lesions characteristic of chronic arthritis. The spinal column was most often the seat of the disease, the alterations varying from slight overlapping of the vertebræ to complete ankylosis, sometimes accompanied by lesions of the sacro-iliac articulation and the long bones of the lower, more seldom by changes in the long bones of the upper extremities.. The phalanges were also often affected, especially in the foot. As yet no clue has been found to explain the frequency of this disease in the early Egyptians, as well as in the soldiers of invading and domiciled foreign armies, whether Roman, Greek or their slaves and captives. That chronic infections caused arthritis then as well as now is hardly to be questioned, but apparently these infections, whatever they were, prevailed more in ancient than modern Egypt, and in hieroglyphic writings the "determinative" of old age is the picture of a man deformed from chronic arthritis. Even pet animals seem to have suffered from the same condition. It is of much significance that as yet no evidence of syphilis, rickets or osseous tuberculosis has been found in old Egyptian remains, although the skeletons of soldiers from invading armies, representing many parts of the ancient world, have been studied in considerable numbers.

Dental disease was prevalent, and, as now, the molars suffered most, especially the third. Evidently abscesses frequently occurred, yet there is no evidence that any dental manipulations were ever performed to relieve such conditions. One of the most popular traditions concerning the ancient Egyptians is that they were skilled in dentistry, but the tombs fail to substantiate this idea. Ruffer says that he has never seen the slightest evidence that they knew anything about filling teeth or making artificial ones. He has seen a number of teeth bound together with gold wire, but this was from a Roman tomb, and the device was evidently for cosmetic purposes only, as it could not possibly have been used for mastication. The teeth were usually clean and in good condition, and apparently the food was soft, for the crowns are not worn down as they are now by the coarse vegetable food of the fellah.

1. THE JOURNAL A. M. A., May 16, 1908; April 10, 1909; April 15, 1911; July 22, 1911.
2. Ruffer, M. A.: Jour. Path. and Bact., 1912, xvi, 439.

GERMANY AWAKENED TO THE NOSTRUM NUISANCE

Whoever has followed the advertising pages of the German medical press during the past two decades must have been struck by the change which has come over the announcements inserted therein by ambitious sellers of medicinal wares. At a time when the situation in American advertising columns was notorious, when discrimination between good and bad, between quackery and therapy, between honest claims and palpable fraud

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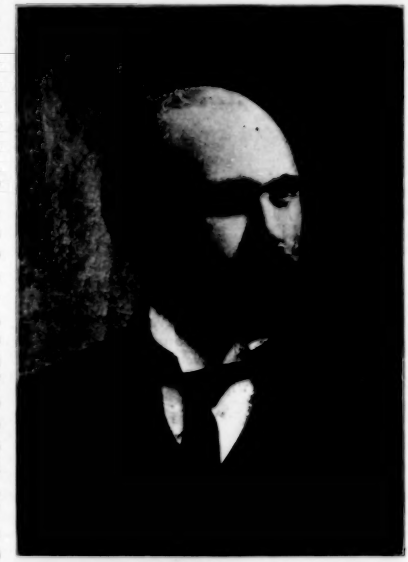
scarcely entered into the routine of the business offices of our medical journals, our contemporaries on the continent showed no symptoms whatever of the infection with frenzied advertising then epidemic and still sporadic in this country. Great are the changes which have come about of late. While the situation in the United States has improved and is manifestly improving, and a higher standard of advertising claims is making itself felt widely, one is surprised to find in the columns of some of Europe's foremost medical weeklies advertisements which have long been barred from our own pages. It appeared a short time ago almost as if Germany and England were to become lands of refuge for rejected advertisements of a certain type.

The medical profession in the land of ideas and ideals has awakened to the situation in its midst. In the last issue of the well-known *Therapeutische Monatshefte*, one of its editors, the Göttingen pharmacologist Professor Heubner,[1] has written very frankly of the situation in his country. The wide-spread advertisement of "body-builders" and "tissue-tonics" so familiar to the American public is assumed to cater to a desire to eliminate the physician as a cause of expense in the household. There are, however, many medicinal products which cannot be dispensed without the intermediation of the physician. Here lies the necessity of appealing to the practitioner by every means and through every channel calculated to yield revenue. Think of journals instituted solely for advertising ends in Germany! Clinical reports distributed as leaflets from supposedly prominent laboratories or the hospitals of famous investigators have become an international nuisance in the mails of professional men. And the substitutions, the false claims, the psychologic deception in name and label—all of these have permeated the land which the foreigner once regarded with sacred awe as the typical home of truth.



THE PRESIDENT-ELECT

Professor Heubner expects no serious improvement to follow from a mere conscientious attention on the part of physicians to the character of their prescriptions. The latter, he believes, is dependent on the fashions of the day. The essential reforms required are: (1) revised legislation respecting the naming of medicinal agents; (2) an insistence that medical publishers shall be guided less by the demands of the manufacturer and more by the interests of the readers, in acceptance of advertising matter; (3) the establishment of a bureau for the investigation and testing of medicinal agents which cannot be prepared in the apothecaries' shops. The efforts of THE JOURNAL of the American Medical Association in the direction comprised in the second recommendation receive due appreciation. Heubner lays considerable stress on the last recommendation. Now that the drug industry has largely eliminated the earlier manufacturing function of the dispensing druggist, the responsibility for efficient products is no longer easily fixed by the physician who prescribes them. A governmental bureau by which the conflicting claims and varied needs would be settled precisely as standards are now fixed for the antitoxins and related products would, in Heubner's belief, create a healthy and harmonious interrelation between manufacturer, druggist and physician. It is to be hoped that whatever efforts are devoted to these ends will be based primarily on the most prominent factor in the problem, namely, the vital interests of the suffering public.

1. Heubner, W.: Allerlei Heilmittel-Unheil, Therap. Monatsh., 1912, xxvi, 185.

Current Comment

THE PRESIDENT-ELECT, DR. WITHERSPOON

The Association, in its choice of leader for the next year, has honored a son of the south and has done honor to itself in the selection. Dr. John A. Witherspoon ranks at the head of the medical profession of the south. He has always stood for high ideals and has been foremost in the campaign for higher educational requirements. He was born in Columbia, Tenn., and received his medical education at the medical department of the University of Pennsylvania, where his proficiency in anatomy was so markedly displayed that he was made assistant demonstrator in anatomy in his third year. He received his degree in 1887 and returned to Nashville, where he has practiced ever since. He soon became connected with Vanderbilt Medical College and has been professor of medicine and clinical medicine since 1895. Dr. Witherspoon has been for many years a member of the American Medical Association, has been a constant attendant at its meetings,

and has always been depended on to give wise counsel when needed. For nine years he served as a member of the Council on Medical Education of the A. M. A. He has been a member and president of the American Medical College Association, the Tennessee State Medical Association, the Southern Medical Association and the Mississippi Valley Medical Association. At the International Medical Congress at Budapest Dr. Witherspoon was selected to deliver the oration in the ceremonies at the unveiling of the statue of George Washington. Dr. Witherspoon is a man of strength, whose power impresses every one with whom he comes in contact, but, withal, he is a soft-spoken, courteous, chivalrous, typical southern gentleman. No man is more beloved in the south than he, and yet no man has done so much to stir up the physicians of his section or to encourage them to higher standards, ethical and educational. The wisdom of the choice of Dr. Witherspoon as President-Elect of the Association is unquestionable. His lovable personal characteristics, his strength and ability, his broad grasp of the advanced medical problems of the day, all combine to make him a welcome leader for the coming year and acceptable to the profession the country over.

THE PRIZE CARTOON CONTEST

In accordance with the custom inaugurated last year at the Los Angeles session, the Council on Health and Public Instruction offered a first prize of $200 and a second prize of $100 for the best series of cartoons on various important phases of public health and hygiene to be exhibited at the Scientific Exhibit at the Atlantic City session. In accordance with this offer, the first prize of $200 was awarded to Mr. H. C. Gregg, cartoonist of the Atlanta *Constitution*, Atlanta, Ga. The second prize of $100 was awarded to Mr. Wood Cowan of Chicago. The cartoons receiving the prizes will appear in THE JOURNAL in the near future.

POLITICS AND QUACKERY

C. W. Mixer of Hastings, Mich., has for some years conducted a fraudulent cancer cure concern under the name of Drs. Mixer.[1] A fraud order was finally issued against Mixer — who, by the way, is not a physician — and mail addressed to "Drs. Mixer" is returned to the sender marked "Fraudulent." At the time the Post-Office investigated this fraud, C. W. Mixer called on his friend, Congressman E. L. Hamilton, to use what influence he could in preventing the postal authorities interfering with his lucrative but villainous business. At the hearing, Congressman Hamilton did what he could for his constituent. Since the fraud order was issued, Mixer has continued to carry on his trade by the simple expedient of changing the name of his concern from "Drs. Mixer" to "Mixer Medicine Co., successor to Drs. Mixer." This change is effected by means of a rubber stamp on the old stationery of the company. The cancer cure swindlers in various parts of the country who have had their business interfered with by the issuance of fraud orders have apparently brought sufficient pressure to bear at Washington to engineer an attempt at crippling the splendid work the postal authorities have done in protecting the public against this particularly cruel form of swindling. A committee has been appointed from the House of Representatives "to investigate the Post-Office Department." Judging from its actions thus far, this body might be more properly named "the committee to whitewash the 'cancer-cure' fakers." In fairness, it must be said that some of the members of this committee — of whom Congressman R. W. Austin of Tennessee is the most active — are anxious to uphold the Post-Office in its good work; other members, particularly the chairman, W. A. Ashbrook of Ohio, and W. I. McCoy of New Jersey, are apparently determined to give these "cancer cure" swindlers all the license they desire. C. W. Mixer has, under the date of June 10, sent out the following letter to his prospective Chicago victims:

Dear Sir:—Some months ago I received a communication from you making inquiry with reference to treatment. I wrote you promptly but have not received any reply from you regarding conditions, etc.

I anticipate being in Chicago for the convention next week as I have been appointed assistant sergeant-at-arms and if you care to have a personal interview or anyone else, you could address me a letter in care of K. Hoyt Stone, Boyce Building, Chicago, Illinois, or you may write me by return mail addressing me here at Hastings, Michigan.

Yours very truly,

C. W. MIXER.

Here we have a pretty example of the community of interest between certain politicians and quacks. C. W. Mixer, cancer-cure faker and fraud, is appointed assistant sergeant-at-arms to the Republican National Convention and desires to mix in a little business — rotten as it is — with his trip to Chicago. A delightful state of affairs indeed! When we feel like blaming the officials whose duty it is to enforce the law against medical and other fakers, let us not forget what *Collier's* said in a case similar to the one we have just recounted: "If you were an obscure subordinate in the Department of Agriculture or the Department of Justice, if you had no motive to proceed against a swindling patent medicine or an adulterated food except your own conscience, if your first move met with personal protests from the congressmen who controlled your salary your promotion and your official existence, how soon would you grow tired?"

THE ATLANTIC CITY SESSION

The session of the American Medical Association at Atlantic City last week, from every point of view, must be regarded as a most successful one. So far as numbers are concerned, the registration, which was 3,600, came within 113 of being as large as that of the remarkable meeting of 1907. The registrations of the preceding meetings in that city were: 1900, 2,019; 1904, 2,894; 1907, 3,713; and 1909, 3,273. Of course these numbers were exceeded when the Association met in large cities; for instance, Boston, 4,722; Chicago, 6,446; St. Louis, 4,084. The registration at Los Angeles last year was

1. This fraud was exposed in THE JOURNAL, May 21, 1910; the matter appears in an elaborate form in "Nostrums and Quackery;" it also is issued in pamphlet form, price 4 cents.

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2,153. The scientific work was unusually good, each section having a splendid program — all were above the average. Two new sections held their first meetings this year: that on Genito-Urinary Diseases, and that on Hospitals. The social functions were all that could be desired. While the Association has met in Atlantic City five times within the last twelve years, the hospitality of the profession seems unexhaustible, and this year Atlantic City did all that was possible to make the visiting members feel that they were most heartily welcome.[1]

NEEDLESS SACRIFICE OF LIFE

Much time and space are being devoted these days to educating the people on the prevention of disease and the reduction of the death-rate from contagious diseases. On many of these subjects the public certainly needs to be instructed for its own protection. Yet there is to-day a large loss of life that results not from ignorance, but from carelessness — not from the carelessness of some other person, but from the carelessness of the one who suffers. Kansas City has recently adopted a new ordinance for the control of travel, not only on wheels, but also on foot. The heedless or foolhardy person who will not profit by the traffic regulations to protect himself, but who strays all over the street, who crosses in the middle of the block, or who attempts to save time by a diagonal route instead of by adhering to the beaten path, is to be regulated. Kansas City has even invented an appropriate name for these individuals. They are called "jay walkers." They are a danger not only to themselves, but to others, and this effort on the part of Kansas City to regulate the pedestrian as well as the driver and the chauffeur is a step in the right direction. The needless loss of life through personal carelessness is hardly realized. Living conditions and surroundings, especially in large cities, are becoming more complex each year. The path of safety lies in obedience to wise restrictions. As we learn to be more law-abiding we shall learn that within the restrictions of the law there is safety and without, there is danger.

1. The report of the General Meeting is given on page 1913; the minutes of the House of Delegates, which were begun last week, are continued on 1893. These minutes will be concluded next week. As the portion held over till next week contains the election of officers, it is of interest to note here the result:

PRESIDENT, DR. ABRAHAM JACOBI.
PRESIDENT-ELECT, DR. JOHN A. WITHERSPOON, Nashville, Tenn.
FIRST VICE-PRESIDENT, DR. PHILANDER A. HARRIS, Paterson, N. J.
SECOND VICE-PRESIDENT, DR. JOHN L. HEFFRON, Syracuse, N. Y.
THIRD VICE-PRESIDENT, DR. H. H. MCCLANAHAN, Omaha.
FOURTH VICE-PRESIDENT, DR. HENRY D. FRY, Washington, D. C.
SECRETARY, DR. ALEXANDER R. CRAIG, Chicago.
TREASURER, DR. WILLIAM ALLEN PUSEY, Chicago.
TRUSTEES: DR. M. L. HARRIS, Chicago; DR. C. A. DAUGHERTY, South Bend, Ind.; DR. W. T. COUNCILMAN, Boston.
MEMBER OF THE JUDICIAL COUNCIL: DR. GEORGE W. GUTHRIE, Wilkes-Barre, Pa.
MEMBER OF COUNCIL ON HEALTH AND PUBLIC INSTRUCTION: DR. WALTER B. CANNON, Boston.
MEMBERS OF COUNCIL ON MEDICAL EDUCATION: DR. JAMES W. HOLLAND, Philadelphia; DR. W. D. HAGGARD, Nashville, Tenn.
Next meeting place, Minneapolis, June, 1913.

Medical News

COLORADO

Hospital Incorporated.—Articles of incorporation of the American Baptist Tuberculosis Hospital Association have been filed with the Secretary of State. The plan of the association is to build hospitals throughout the United States where patients suffering from tuberculosis may receive care. It is planned to establish the first of these institutions in Denver. All Baptist churches may be admitted to membership, and it is proposed to assess the church members 10 cents each, annually.

Doctor of Ophthalmology.—At the recent meeting of the regents of the University of Colorado, on the recommendation of the medical senate, it was resolved hereafter to confer the degree of doctor of ophthalmology on properly qualified candidates. This degree can be secured two years after taking the degree of doctor of medicine. Candidates are required to take one year of practical clinical work in diseases of the eye, doing in connection therewith systematic reading, after which they must take the special course in ophthalmology at the University of Colorado, in Denver, and submit an acceptable thesis.

ILLINOIS

New Hospital.—The Whiteside Public Hospital has been taken over by the city of Sterling and will hereafter be a municipal hospital with accommodations for between forty and fifty patients. Dr. S. S. Kehr is chairman of the medical board.

Tent City at Oak Forest.—Cook County has planned to install hundreds of tents for tuberculosis patients at the County Institution, Oak Forest. The health authorities of the county are making a systematic canvass for patients in the early stage of the disease in order to increase the effectiveness of prompt treatment.

Personal.—Dr. Jennie Lyons, Champaign, was elected secretary of the County Secretaries Association at its recent meeting in Springfield.——Dr. James A. Clyne, Joliet, who has been under treatment at Mercy Hospital, Chicago, is reported to be improving.——Dr. A. M. Hill, Genoa, sailed for Europe, June 1.——Dr. E. P. Cook, Mendota, who has been ill with typhoid in St. Luke's Hospital, Chicago, is reported to be convalescent.——Dr. H. F. Litchfield, Kankakee, has assumed his duties as physician at the Soldiers' Home, Quincy.

Chicago

Off for Europe.—Dr. and Mrs. M. L. Harris and family, Dr. and Mrs. John B. Murphy and family, Dr. and Mrs. E. Wyllys Andrews and family, Dr. and Mrs. Arthur D. Bevan and Dr. Lewis L. McArthur sailed for Europe, June 11.

New Hospital Opened.—The Lake View Hospital Association announces the completion of its new hospital at 4424 Clarendon Avenue, with a capacity of fifty-five beds. The staff consists of Drs. Gilbert H. Wynekoop, Charles I. Wynekoop and Emil E. Torell, surgeons; Drs. Anders Frick, F. Eldridge Wynekoop, Seth Wicks, physicians; Dr. Alfred N. Murray, eye, ear, nose and throat; Dr. E. O. Benson, diseases of children; Dr. John W. Birk, obstetrics and gynecology, and Clyde H. Warner, D.D.S., dental surgeon.

MARYLAND

Personal.—Dr. Timothy Griffith has been elected president of the Minors Hospital, Frostburg, for the establishment of which the legislature has appropriated $25,000.——Rev. Wm. B. Everett, Chevy Chase, who graduated from the University of Maryland in 1862, celebrated the fiftieth anniversary of his graduation by being present at the commencement exercises of his alma mater.——Dr. Joseph Collins, Calvert, was thrown from his buggy in a runaway accident June 3, and seriously injured.

Baltimore

Typhoid Vaccine Ready.—The health department of Baltimore announces that it has already vaccinated about five hundred persons against typhoid and is prepared to issue antityphoid vaccine to dispensaries and to any resident physician who makes application.

Foreign Visitors in Baltimore.—Among recent visitors to Johns Hopkins Hospital were Dr. Thomas Fiachi, Sydney,

Australia; Major M. Miyate, Surgeon Imperial Japanese Army; Prof. R. Wreden, St. Petersburg; Dr. M. V. Silbermarck, Austria, and Dr. J. A. de Oliveria, Botelho, Rio de Janeiro.

Sanatorium for Eastern Shore.—In accordance with a law passed by the last legislature, the commission appointed to purchase a site on the eastern shore, for an institution for cases of incurable consumption, met at Salisbury and decided to buy the land and buildings formerly known as the Pine Bluff Sanitarium for $15,000. The property consists of twenty acres on the southern bank of the Wicomico River, near Salisbury, densely wooded with pines and has a large building equipped with modern improvements. The bill also provided $5,000 for the erection of shacks and a like sum for maintenance for one year.

Personal.—Dr. George B. Reynolds, chief surgeon of the police department, was held up, beaten and robbed, May 10.——Dr. Alexander T. von Schulz was struck in the head by a brick thrown by a negro, June 3, and, while seriously injured, is reported to be improving.——Drs. Harvey W. Cushing and John M. T. Finney sailed for Europe, June 11.——Dr. Daniel W. Smith has succeeded William H. Davenport as chief tenement inspector of Baltimore.——Dr. William B. Wolf was operated on recently in St. Agnes Hospital.——Dr. Elliott H. Hutchins has been appointed police surgeon, vice Dr. Thomas J. O'Donnell, term expired.——The following appointments of police surgeons have recently been made: Dr. J. M. Craighill, chief surgeon, and Drs. Walter F. Sowers, Thomas P. McCormick and Hubert C. Knapp.——Dr. John Turner has been appointed physician to the Lock Raven Construction Camp.——The following fellows have been appointed at Johns Hopkins University: Gardner C. Basset, psychology, and Henry C. Schmeisser, pathology.

MASSACHUSETTS

New Officers.—Franklin District Medical Society at Springfield: president, Dr. C. F. Canedy; secretary-treasurer, Dr. W. K. Clark, both of Greenfield.

Personal.—Dr. Samuel Green, Boston, who has been confined in the Boston City Hospital on account of injuries sustained in a fall, is reported to be greatly improved.——Dr. Charles Sturtevant, Hyde Park, has been appointed associate medical examiner of Suffolk County.

Honorary Medical Staff.—The following list of physicians is announced as the honorary medical staff of the Lawrence Tuberculosis Hospital: Dr. John B. Bain, chief of staff; and Drs. Joseph Howard, Albert W. Hancock, Henry F. Dearborn, Alphonse H. Petit, Francis A. Cregg, James A. Hogan, Anthony Fleming, Bernard J. Mulholland, Carl H. Eidam, Ernest P. Fuller, John J. McAidle, Maurice Fishman and Abdulnassch Massawir.

Suggest Names for Health Chief.—The committee of Suffolk County Medical Society has suggested the names of the following five physicians as chairman of the Board of Health of Boston, to succeed Dr. Samuel H. Durgin, who retires next month: Dr. William J. Gallivan, Boston, chief of the Bureau of Child Hygiene of the Boston Health Department; Dr. Charles O. Probst, Columbus, secretary of the State Board of Health of Ohio; Dr. Hibbert W. Hill, Minneapolis, treasurer of the Boston City Laboratory for seven years; Dr. Edward B. Beasley, Baltimore, and Dr. Francis G. Curtis, secretary of the Newton Board of Health for nineteen years.

MICHIGAN

Personal.—Dr. R. J. Hutchinson has been reelected chief-of-staff; Dr. G. L. McBride, vice-chief-of-staff, and Dr. Reuben Mauritz, secretary of the staff of Butterworth Hospital, Grand Rapids.

School for the Deaf Burned.—The Michigan School for the Deaf, Flint, burned May 22. A meeting of the board of trustees was held two days later at which plans were made for the early rebuilding of the institution.

Alumni Clinics.—During the nine days' meeting of the Alumni Society of the Detroit College of Medicine, three hundred and forty members registered. Clinics were held during each day and evening of the reunion.

Blue Star Day.—The State Society for the Study and Prevention of Tuberculosis and the Detroit Tuberculosis Sanatorium benefited by Blue Star Day, which was held June 11, in Detroit. On this day collections were taken up by "tagging" for the benefit of these organizations.

Deportation of Leper Suspect.—On May 24, Herman Hirschfield, the leper suspect of Bay City, who has been isolated for several weeks at Centerville, Ia., was returned by automobile to his home in Bay City. The local authorities have decided to permit Hirschfield to remain in his own home, but he will be required to keep off the front porch and will not be allowed to go out on the street. His malady has been decided to be typical leprosy.

Clean-Up Day in Michigan.—To the end that concerted activity covering the entire state might be established, the governor of Michigan designated May 15 as Public Health and Clean-Up Day. In accordance with the spirit of the proclamation, the State Board of Health, through Dr. Robert L. Dixon, its secretary, asked that May 15 be made a day of general cleaning up of insanitary surroundings and of the establishment of sanitary, healthful conditions.

State Board of Health to Inspect Resorts.—The Michigan State Board of Health is securing a list of the summer resort associations and of the owners of property used for resort purposes and will make sanitary investigations of these places. The board has formulated rules to be observed by cottagers and visitors of the summer resorts, including the use of dry-earth closets, the covered garbage can, the prohibition of cleaning of fish on beaches, the proper care and removal of refuse from lunch counters, pavilions, etc., and the prohibition of throwing refuse of any kind into the lakes.

MISSOURI

Personal.—Dr. George C. Boteler, St. Joseph, has been appointed city physician.——Dr. R. S. Magee, Fulton, senior assistant physician at the Fulton State Hospital, has resigned.

Doctors' Day.—May 24 was set aside by the school authorities of Sedalia as "Doctor's Day," and on that day two physicians visited each school in the city and spoke to the children of the importance of sanitation, the dangers of the house-fly, etc.

New Officers.—Pan-Missouri Medical Association, in St. Louis, May 29-June 1: president, Dr. J. M. Harris, Sedalia; secretary, Dr. J. F. Shannon, Kansas City.——Fourteenth District Medical Society, in Marshall, May 9: president, Dr. C. T. Ryland, Lexington; secretary-treasurer, Dr. John R. Hall, Napton.

Health Work by Districts.—The State Board of Health has organized the state into seven health districts which are to be a unit in the fight against communicable diseases. The board will call meetings in each of these districts at which the local and state health authorities will cooperate in plans for a betterment of health conditions. The first of these meetings is to be held in St. Louis, June 26.

State Association Meeting.—The fifty-fifth annual meeting of the Missouri State Medical Association was held in Sedalia, May 21-24, and the following officers were elected: president, Dr. Robert M. Funkhouser, St. Louis; vice-presidents, Drs. J. S. Wallace, Brunswick, H. S. Crawford, Harrisonville, J. N. Baskett, Hannibal, C. C. Conover, Kansas City, and J. H. Timberman, Marston; secretary and editor, Dr. E. J. Goodwin, St. Louis; treasurer, Dr. J. F. Welch, Salisbury; and councilors—eighth district, Dr. L. W. Cape, Maplewood; thirteenth district, Dr. F. E. Murphy, Kansas City; twentieth district, Dr. F. J. Lutz, St. Louis; twenty-third district, Dr. T. C. Allen, Bernie; twenty-fourth district, Dr. J. B. Wright, Trenton; twenty-second district, Dr. J. S. Cannon, Fornfelt; and twenty-seventh district, Dr. J. H. Elliott, Westplains; orator on medicine, Dr. Albert H. Hamel, St. Louis; orator on surgery, Dr. E. F. Yancey, Sedalia; delegates to the American Medical Association, Drs. C. R. Woodson, St. Joseph, H. L. Reid, Charleston, and A. W. McAlester, Kansas City; and member of the committee on public health and legislation, Dr. B. B. Parrish, Kirksville.

NEW JERSEY

Sanitarium Opens.—The Philadelphia Sanitarium for Children at Red Bank opened for the summer June 8. Two river steamboats make hourly trips between Philadelphia and the sanitarium. There is a resident physician at the institution and two nurses are constantly on duty.

New Jersey Alumni of University of Pennsylvania Meet.—Members of the New Jersey State Medical Society who are graduates of the University of Philadelphia held a reunion at Spring Lake May 29, during the meeting of the State Society. The following representatives of the alumni addressed the meeting: H. Genet Taylor, Camden; E. Hollingshead, Pemberton; B. W. Hoagland, Woodbridge; Hyman I. Goldstein, Camden; J. J. McGuire, Trenton; Alexander McAlister, Camden; C. J. Craythorn, Trenton; Alexander S. Ross, Camden; Alexander Marcy, Jr., Riverton, and J. Frances De Silver, Atlantic City.

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NEW YORK

Personal.—Dr. M. D. Graham, Utica, has returned from Europe.——Dr. DeVere M. Hibbard, Olean, is reported to be seriously ill as a result of a cerebral hemorrhage.——Dr. A. Miller, Jordanville, celebrated his ninety-third birthday anniversary, May 21.

Fly Crusade Ordered.—The State Department of Health has sent out notices to the health officers throughout the state urging a vigorous campaign against the fly. It is pointed out that the same expenditure of effort at the beginning of the season will accomplish much more than it possibly can at the height of the summer.

New Officers.—Steuben County Medical Society at Bath, May 15: president, Dr. John A. Conway, Cornell; secretary-treasurer, Dr. W. W. Smith, Avoca.——Medical Society of the County of Albany, May 8: president, Dr. L. H. Neuman; secretary, Dr. Edwin L. Draper, both of Albany.——Rochester Public Health Association, May 13: president, Dr. Henry T. Williams; directors, Drs. John M. Lee, G. I. Bidwell and Mary E. Dickinson.——Schuyler County Medical Society, at Watkins, May 14: president, Dr. A. H. Jackson, Odessa; secretary-treasurer, Dr. F. B. Bond, Watkins.

State Charities Aid Association.—A leaflet has been issued by this organization in celebration of its fortieth anniversary showing that among the important accomplishments of this organization either alone or in conjunction with other agencies are the following: First training school for nurses established at Bellevue Hospital; tenement house reform; legislation providing for the state care of the insane; establishment of the Craig Colony for Epileptics; campaign for the prevention of tuberculosis begun; and laws enacted defining the powers and duties of health officers, and authorizing the establishment of general hospitals in cities, towns and villages.

Hospital Notes.—The energy and enthusiasm of the residents of Flushing in their efforts to raise $100,000 for a hospital in that place, are evidenced by the fact that on June 7, $75,000 had already been pledged.——It is planned to abandon the present building of the Frances Elliott Austin Maternity Hospital and Infant Home, Albany, and to erect a new building which will contain a maternity department, a department for infants of Roman Catholic parentage, and one for children between the ages of two and five. The hospital is to be nonsectarian. The state has made an appropriation of $40,000 toward the building and a campaign is being conducted among the citizens of Albany to raise the balance required.——The State Board of Health has approved the selection of the George Hobbs Farm, near Cranesville, as a site for the Montgomery County Tuberculosis Hospital. The site includes 120 acres of which twenty-five acres are in hard wood.——Martin Woodbury, Hornell, has donated a site for the Steuben County Tuberculosis Hospital. The site is in the town of Greenwood and comprises seventy-one acres of ground.——Arnold Gregory, a farmer living near Albion, has provided for a hospital to be known as the Arnold Gregory Memorial Hospital.——Contributions to the Ellis Hospital (Schenectady), tag day on May 18, amounted to $2,623.57.

New York City

Small-Pox on Steamer.—The Russian steamship *Kursk*, which arrived in the harbor, June 2, from Libau, was quarantined on account of two cases of small-pox, one in the first cabin and one in the steerage.

The Cartwright Lectures.—The subjects of the Cartwright lectures to be delivered by Prof. Ludwig Pick in the Academy of Medicine during the second week in November will be as follows: 1. Some pathologic-anatomic findings of hypophysis diseases and their practical value. 2. Modern views of the tumors of the nervous tissue. 3. Pathologic anatomy of true and false hermaphroditism in man.

Personal.—Dr. Philip F. O'Hanlon, who for the past fifteen years has been coroner's physician, has been appointed police surgeon.——Dr. Isaias A. Lehman of the Bronx was injured on June 1 in a collision between his automobile and a trolley car.——Dr. W. Grant Hague sailed for Europe, June 8.——Dr. Harry T. Summersgill has been appointed superintendent to the New York Post-Graduate Medical School and Hospital, succeeding Dr. Frederick Brush, who resigned to take charge of the Burke Foundation.——Dr. Francis Calavia was called from his home May 23, and shot down by men supposed to be "Black Hand" blackmailers.

Measles Epidemic Due to Too Few Inspectors.—There is an unprecedented epidemic of measles in the congested districts of this city which is attributed to the shortage of inspectors to carry out the necessary fumigation of infected premises. It has been pointed out that delay in fumigation for a period of three or four weeks after the inception of the disease instead of two weeks confines already depleted children to close dark rooms for far too long a period and predisposes them to subsequent infection, especially that of tuberculosis. The Department of Health urges that influence may be brought to bear on the Board of Estimate to grant a sufficient appropriation for the appointment of more inspectors.

Endowment for Cancer Study.—The endowment fund of the General Memorial Hospital has been increased by a contribution of $100,000 from a scientist whose name has not been made public, for the maintenance of twenty beds for cancer patients. The hospital was chartered for the study and treatment of cancer and allied diseases and is supported by the Collis P. Huntington fund. This institution has been placed at the disposal of Cornell Medical College and a great deal of research work has been done. An opportunity is given to trained men to study the disease at the bedside and, for the first time, New York has an institution similar to those established in Berlin, Heidelberg, Paris, London, Boston, Buffalo and St. Louis.

Cancer Research.—With the appointment of Prof. Francis Carter Wood to the position of director of cancer research under the George Crocker Research Fund of Columbia University, the final step in the organization of the work which is to be carried out under this immense gift has been taken by the trustees of Columbia University. The construction of the laboratories and the organization of the staff will probably consume another year, so that it will be some time before much effective research will be under way. The Crocker fund will also obtain by this appointment certain additional resources which will be of great advantage as Prof. Wood is already director of the laboratories of St. Luke's Hospital, and has a clinical service there for the scientific study of special cases. This will permit the workers under the fund to investigate the claims of alleged cancer cures with speed and certainty, and if fortune should favor Columbia so that any of its workers should discover a remedy for this disease, the necessary preliminary tests could be made easily in Prof. Wood's service in St. Luke's.

PENNSYLVANIA

New Appointments to Anatomic Faculty.—The University of Pittsburgh School of Medicine announces the following new instructors in the department of anatomy: Dr. Edgar Davidson, Congdon, instructor in anatomy in Cornell Medical School, New York City, vice Dr. E. S. Edgerton, resigned, and Dr. Otto Frederick Kampmeier, fellow in comparative anatomy at Princeton University.

Personal.—Dr. W. Rowland Davies, Scranton, was operated on for appendicitis May 19, at the West Side Hospital.——Dr. William F. Randall, Dushore, sustained a fractured leg, severe burns about the face and hands and contusions of the body in an accident, May 20, in which the gasoline in his automobile tank ignited and he was forced to leap into the waters of Lycoming Creek twelve feet below, to save his life.——Dr. Z. C. Myers, York, has returned after being under treatment in a Philadelphia hospital.

Philadelphia

Jefferson College Honors.—At the annual commencement of Jefferson Medical College, June 3, honorary degrees were conferred on three famous graduates, Drs. J. Solis-Cohen, Joseph S. Neff and William W. Keen.

New Hospital.—A new infirmary, to be known as the Babies' Hospital, will be opened at Parkside Ave and Wynnefield, June 10, and will remain in commission until October. This hospital is intended for the care of infants under three years of age, suffering from diarrheal diseases.

Personal.—Dr. William H. Walsh has succeeded Dr. J. William Morgan, resigned, as superintendent of the Philadelphia Hospital for Contagious Diseases.——Dr. Joseph S. Neff, director of health and charities was given the honorary degree of LL.D. at the forty-second annual commencement of Ursinus College, Collegeville, June 5.

Campaign for Infant Life.—Besides the Babies' Hospital at Wynnefield, the regular baby-saving campaign of the city was inaugurated June 15, when the recreation piers along the river front were thrown open to the public. Visiting nurses are sent to the congested districts of the city and every effort is being made to carry on the work of saving the babies.

Public Asked to Aid in Mosquito War.—The Department of Public Works and the Bureau of Health have planned to cooperate in a crusade against mosquitoes. By filling stagnant ditches on dumping grounds and by issuing bulletins, educating and appealing to the public to exterminate the breeding places

of the insects, they hope to eliminate them, and look forward to a reduction in disease.

Honor Memory of Local Physician.—"A Heidelberg Students' Night" was celebrated by the Carl E. Vischer Medical and Surgical Association, June 4. Dr. Carl E. Vischer, of this city, in whose memory this society was formed, was a graduate of Heidelberg, so the room was decorated in the colors of that university. Dr. J. H. Closson, president of the association, presided.

Jefferson Alumni Officers Elected.—At the annual business meeting of Alumni Association of the Jefferson Medical College, June 1, the following officers were elected: president, Dr. S. Makuen Smith; vice-presidents, Drs. J. W. West and M. B. Dwight; recording secretary, Dr. Henry Gaskill; corresponding secretary, Dr. E. J. Klopp, and treasurer, Dr. Alfred Heineberg.

Baby Show.—The Baby-Saving Show closed a four-day exhibit, June 2, with a record attendance of 25,000. The show will be given in three other sections of the city—from June 6 to 9, it will be held in the Boys' Club at Howard and Somerset Streets; June 13 to 16, Young Men's Christian Association, Fifty-Eighth and Germantown Avenue, and from June 20 to 23, Lochheim Hall at Main and Rector Streets, Manayunk.

Pier Camp Opened.—The day camp for tuberculosis sufferers on the city pier at the foot of Bainbridge Street was opened with a goodly attendance, June 8. Dr. Albert P. Francine, who is in charge of the camp, has sent out an appeal for funds. Last year the camp was open from July until December and had an average of twenty-five patients a day. More than $1,800 was raised by popular subscription and $300 of this sum was left over to begin the work this year. However this amount is sufficient for only a very short time.

Housing Commission to Enforce New Law.—The law providing that each dwelling must have at least one water fixture for its own use, except in the cases of houses in the rear courts, where there are no yards, and in which case there must be a hydrant for every three persons, went into effect, June 8. The Philadelphia Housing Commission is prepared to prosecute in cases in which landlords neglect to comply. Failure to provide the proper fixtures subjects an owner to a fine of $10 per month for each month or part of a month after the law became operative.

Plans for Sane Fourth.—At a meeting of the Reconstructed Fourth Association at the Mayor's office on June 5, programs for neighborhood celebrations of the Fourth of July were discussed and for this purpose the city is to be divided into seventeen sections. Resolutions were adopted that requested that public or semi-public institutions be opened on Independence Day, and as further incentive to the public to take advantage of an opportunity to visit them, the Philadelphia Pageant Commission was requested to appoint committees to be at these institutions and to give brief talks of their history and purpose.

Citizens Approve Owen Bill.—A petition has been sent to Senators Boise, Penrose and George T. Oliver and Representative John H. Rothermel, by citizens of Reading, Burks County, respectfully requesting favorable consideration for the Owen bill which provides for the establishment of a United States Health Service. The bill appeals to the petitioners "as embodying many features that stand for health and the purity of the nation and the various bureaus and divisions which shall be coordinated in the service, to wit: public health and marine-hospital; food and drugs; vital statistics; general conservation.; sanitary engineering; personnel and accounts, and publications."

Medical Chief's Report.—Dr. Walter S. Cornell, chief of the corps of medical inspectors, in a report presented to Dr. Joseph S. Neff, Director of the Department of Health, states that the grade of work being performed in the schools has bettered to a material degree since 1910, with a decrease in the cost of examination per child of more than 1 cent, the average in 1910 being 26 cents, and for the current year, 25 cents, remarkable because of the added expenditures caused by the large increase in school nurses. In April, 1910, 11,800 children were examined, while in April, 1912, this number increased to 13,600. The defects discovered reached 15,500, an increase of 11,000. Dr. Cornell states that the eye dispensaries are so crowded with applicants that it is impossible to obtain great results.

SOUTH DAKOTA

Railway Surgeons Hold Meeting.—The annual meeting of the South Dakota Academy of Railway Surgeons was held in Mitchell, May 25, and the following officers were elected: president, Dr. W. R. Ball, Mitchell; vice-president, Dr. Fred Treon, Chamberlain; secretary-treasurer, Dr. J. L. Foxton, Huron. The next annual meeting will be held in Huron in September.

Annual Meeting of State Society.—The South Dakota State Medical Society held its thirty-first annual meeting in Mitchell, May 22-24, under the presidency of Dr. W. G. Smith, Sydney, and elected the following officers: president, Dr. C. E. McCauley, Aberdeen; vice-presidents, Drs. F. A. Spafford, Flandreau, and Fred Treon, Chamberlain; and secretary-treasurer, Dr. R. D. Alway, Aberdeen (reelected). The next meeting will be held in Vermillion.

WISCONSIN

Hospital Dedicated.—The new St. Mary's Hill Hospital, Milwaukee, conducted by the Sisters of St. Francis, was dedicated May 12.

Asks for New Maternity Hospital.—The Milwaukee Maternity Hospital and Free Dispensary Association has sent out several thousand letters in its attempt to raise $50,000 for a new hospital.

Councilor District Election.—The Ninth Councilor District Medical Association met in Stevens Point, April 30, and elected Dr. L. H. Pelton, Waupaca, president, and Dr. R. P. Potter, Marshfield, secretary-treasurer.

Medical Club Banquet.—About seventy were present at the annual banquet of the Oshkosh Medical Club, May 8. Dr. W. N. Linn was unanimously reelected secretary of the club, and Drs. Brockway, Hogan and Schneider were placed in charge of the program for the coming year.

State Society Meeting.—The sixty-fifth annual meeting of the Wisconsin State Medical Society was held in Wausau, May 21-24. Dr. Arthur J. Patek, Milwaukee, was elected president; Dr. Charles A. Armstrong, Boscobel, vice-president; and Dr. H. E. Dearholt, Milwaukee, delegate to the National Legislative Council.

Medical Women Meet.—At the third annual meeting of the Wisconsin Medical Women's Association, held in Milwaukee, May 30, the following officers were elected: president, Dr. Lucila E. Axtell, Marinette; vice-president, Dr. Julia Riddle, Oshkosh; secretary, Dr. Minnie M. Hopkins, Oconto; treasurer, Dr. J. M. Droppers, Milwaukee; and censor, Dr. Irene G. Tomkiewicz, Milwaukee.

Personal.—Dr. G. C. Ruhland, city bacteriologist of Milwaukee, sustained an infection of the hand while examining the brain of a cat, supposed to have rabies, recently.——Drs. E. S Hays, J. V. R. Lyman and H. Midelfart, have been elected directors of the board of health of Eau Claire.——Dr. G. Windesheim has been reelected chairman of the board of health of Kenosha.——Dr. G. L. Bellis, Antigo, has been appointed a member of the staff of the State Sanatorium for Tuberculosis, Wales.——Dr. A. C. Sullivan has been appointed medical supervisor of the public schools of Madison.——The physicians of Ashland have agreed to give free medical examinations to the school children of the city.——Dr. Sara I. Morris has been appointed medical adviser of the Women's Department of the University of Wisconsin, Madison, vice Dr. Helen Dobson Denniston, resigned.

GENERAL

Interstate Practice.—A concurrent resolution was submitted to the House of Representatives of Louisiana, May 17, permitting physicians within six miles of the Texas and Arkansas frontiers of the state to practice in Louisiana without securing a state license.

Meeting of Sanatorium Association.—The seventh annual meeting of the American Sanatorium Association was held in Washington, May 29, Dr. V. Y. Bowditch, Boston, was elected president; Dr. Lawrason Brown, Saranac Lake, N. Y., vice-president, and Dr. Harry Lee Barnes, Wallum Lake, R. I., secretary-treasurer.

Pellagra Conference.—A National Conference on Pellagra will be held in Columbia, S. C., October 3 and 4. Among the speakers already announced are Surgeon-General Rupert Blue, Dr. C. H. Lavinder and Dr. R. M. Grimm, U. S. P. H. & M.-H. Service; Dr. P. E. Garrison, U S. Navy; Dr. J. F. Silver, U. S. Army, and Carl S. Gesberg, of the National Bureau Plant Industry.

Meeting of Tuberculosis Experts.—At the eighth annual meeting of the National Association for the Study and Prevention of Tuberculosis held in Washington, May 30-31, the following officers were elected: president, Homer Folks, New York City; vice-presidents, Drs. Robert H. Babcock, Chicago, and Edwin R. Baldwin, Saranac Lake, N. Y.; and secretary, H. B. Jacobs, Boston.

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Baltimore and Ohio Surgeons Meet.—At the twenty-third annual meeting of Baltimore and Ohio Association of Railway Surgeons, held in Philadelphia, May 29 to June 1, the following officers were elected: president, Dr. C. J. Wintin, Cincinnati; vice-presidents, Dr. John Palmer, Jr., Wilmington, Del., and Page Edmunds, Baltimore; secretary-treasurer, C. E. Johnson (reelected), and members of the executive committee, Drs. W. F. Morrison, Philadelphia, H. S. Hedges, Brunswick, Md., and J. W. Hays, Albion, Ind.

Gynecologists Meet.—The American Gynecological Society held its thirty-seventh annual meeting in Baltimore, May 28 to 30, under the presidency of Dr. Howard A. Kelly, Baltimore, and the following officers were elected: president, Dr. Henry C. Coe, New York City; vice-presidents, Drs. George H. Noble, Atlanta, Ga., and George Gilhourn, St. Louis; councilors, Drs. Howard A. Kelly, Baltimore, George. Ward, New York City, and Palmer Findley, Omaha, Neb.; secretary, Dr. LeRoy Broun, New York City, and treasurer, Dr. J. Wesley Bovée, Washington, D. C.

Annual Meeting of Academy.—The thirty-seventh annual meeting of the American Academy of Medicine was held in Atlantic City, May 31 to June 1. The academy adopted resolutions expressing "its sense of the extreme importance of the early establishment of a Department of Public Health as a part of the national government." The following officers were elected: president, Dr. Roy Lyman Wilbur, San Francisco; vice-presidents, Drs. H. A. Tomlinson, St. Peter, Minn., W. Edgar Darnall, Atlantic City, Alice Wells Tallant, Philadelphia, and J. E. Tuckerman, Cleveland; secretary, Dr. Charles McIntire, Easton, Pa. (reelected), and assistant secretary, Dr. W. L. Estes, Jr., South Bethlehem, Pa.

Personal.—Dr. Edward H. Hume, for several years a medical missionary in China and in charge of the work carried on by Yale University in that country, is visiting in the United States.——Dr. George Converse, U. S. P. H. & M.-H. Service, San Francisco, has been given leave of absence for two years in order to take charge of an inclusive work for sanitary improvement in the city of Iquites, Peru, for which the Peruvian government has appropriated one million dollars.——Capt. Joseph H. Siler, M. C. U. S. Army, Passed Assistant Surgeon Phillip E. Garrison, U. S. Navy, and Ward C. McNeal, New York City, making up the Thompson-McPhadden Pellagra Commission, left New York, May 27, to spend five or six months at Spartanburg, S. C., in investigations into the causes of pellagra.

Bequests and Donations.—The following bequests and donations are announced:

St. Louis Maternity Hospital, $5,000, by Adolphus Busch, for the building and endowment funds.

New York Post-Graduate Hospital, $50,000, by the late John Torrance Banneck.

New York Society for the Relief of Ruptured and Crippled, $10,000, by the will of Henry Idem, Pelham Manor.

St. Christopher's Hospital, Brooklyn, $5,000, by the will of Henry C. Huibery.

Missouri Baptist Sanitarium, St. Louis, $100,000, by A. D. Brown, contingent on the raising of $50,000 additional before Aug. 24, 1913.

Nassau Hospital, New York, $17,000 annually guaranteed toward the maintenance fund by Mrs. Charles Steele.

Mount Sinai Hospital, New York City, $10,000; Montefiore Home, $5,000; New York Association for the Improvement of the Condition of the Poor, $5,000; Home for Aged and Infirm Hebrews, $5,000, and St. John's Guild Floating Hospital, $5,000, by the will of the late Benjamin Guggenheim.

Tuberculosis Preventorium, Farmingdale, N. J., $5,000, from Jacob Schiff, New York City, toward the construction of two additional open-air camps.

New York Skin and Cancer Hospital, one-half of the residuary estate of Mrs. Cornelius Storrs, amounting to about $1,000,000.

FOREIGN

The Isolation Hospitals at Guayaquil.—Guayaquil, Ecuador, is called in the newspapers the "pesthole of the Pacific," but under the new administration of President Plaza, who has lived for many years in New York, introduction of modern sanitary methods is being planned and pushed, our Secretary of State encouraging the Guayaquil authorities in the task. A member of the profession, Prof. L. Becerra, has recently been appointed a member of the cabinet. The *Public Health Reports* for June 7 states that since the beginning of 1912 Guayaquil has had 147 cases of yellow fever and 124 of plague. The last number of the *Boletin de Medicina y Cirugia* of Guayaquil brings an illustrated description of the isolation hospitals for bubonic plague, yellow fever and small-pox, in charge of W. Pareja, who publishes in the same number a study of albuminuria during yellow fever. The buildings are constructed according to modern principles, spacious and airy. The small-pox hospital has been closed for two years as there has been no case of small-pox during this period, it is stated. The bubonic plague boarding pavilion *(pabellon de pensionistas)* contains twenty-eight apartments, fourteen for the sick and the others for their families which may wish to accompany them. The plague pavilion proper has eighty beds. Pareja reports that the alarming albuminuria found on examining 300 yellow-fever patients soon subsided without leaving a trace, even when 5 or 10 or even 20 gm. of albumin per liter had been eliminated at the height of the disease.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, May 25, 1912.

The Parliamentary Committee on Nostrums

The parliamentary committee on nostrums has held another sitting. Evidence was given by the principal clerk of the government department which deals with patent medicines that no control was exercised over advertisements. Proceedings for fraud on the ground that nostrums could not effect the cures claimed were practically unknown. The onus to prosecute was on people who thought they had been defrauded. The difficulty in proving fraud had been found almost insuperable. Thus, in the notorious case of Harness' so-called "electric belts," proceedings were taken by private persons on the ground that they had been defrauded by the false advertisements. Physicians gave evidence that the belts could not possibly cure the diseases they were said to cure. But the defense called a number of persons of respectability who declared that they had been cured, and the result was that the case was dismissed. Dr. Nestor Tirard, medical expert to the British Pharmacopeia Committee of the general medical council, stated that the council was the censor of the standard and purity of drugs employed by physicians. The last edition of the pharmacopeia was issued in 1898, and another was about to be issued. The interval was longer than usual, as the new remedies introduced had not been considered of sufficient importance to justify a new edition before. Remedies had to gain general acceptance before they were admitted to the pharmacopeia. The attitude of the general medical council with regard to nostrums was this: If on analysis an extensively used nostrum was found to contain a scheduled poison, such as morphin, strychnin or mercury, when an edition of the pharmacopeia was issued a formula for a substance analogous to this was introduced, so as to safeguard the public against any change of strength. Thus a formula equivalent to chlorodyne was introduced. Dr. Tirard was asked whether, if a person devised and advertised a new combination of drugs of a perfectly legitimate character, the council proceeded to analyze it and used a combination which was the discovery of an individual. He replied that there was no great discovery in putting together drugs and that the genesis of nearly every nostrum was the prescription of a doctor. The council had no wish to suppress proprietary medicines, some of which—the synthetic preparations—were the result of advancing knowledge. The ascertaining of the value of the new drugs was left to private enterprise. The body to which the compilers of the pharmacopeia were chiefly indebted was the Therapeutic Committee of the British Medical Association.

The Congress of the Universities of the Empire

On July 2 a Congress of the Universities of the Empire will be opened in London; fifty-two universities will each be represented by four delegates. The London committee includes the chancellors of the universities in the United Kingdom, the Prime Minister, the leader of the opposition and the high commissioners of the dominions. The subjects to be discussed are: (1) specialization among universities; (2) interuniversity arrangements for postgraduate and research students; (3) the relation of universities to technical and professional education and to education for public services; (4) interchange of university teachers; (5) the problem of the universities in the east in regard to their influence on character and moral ideals; (6) residential facilities in connection with universities; (7) conditions of entrance to universities and mutual recognition of entrance tests; (8) action of the universities in relation to the after-careers of their students; (9) university and tutorial class work; (10) the establishment of a central university bureau, its constitution and functions; (11) the position of women at universities; and (12) representation of teachers and graduates on the governing body of a university.

Boric Acid in Butter

An experiment has been made by the Food Export Department of Victoria (Australia), which must help to confirm the use of boric acid as preservative in butter. Victorian butter

factories were asked to submit four boxes from one churning, to two of which boric acid in the amount permitted by the Australian Commonwealth (0.5 per cent.) had been added, while the other two were free from preservatives. One of each was shipped to England while the duplicates were retained in the local cool stores. Cable messages have been received from London that the trade is strongly in favor of the retention of the preservative, and that the butter containing the boric acid has a market preference of $2 per hundredweight, mainly on the score of flavor.

Sir David Bruce

Col. Sir David Bruce, F.R.S., has received special promotion to the rank of surgeon-general, in consideration of his eminent services in the cause of science. Since his earliest years he has been an enthusiastic naturalist. After entering the Army Medical Service he turned his attention to pathology. While quartered at Malta he discovered the micrococcus of Malta fever. Until 1894 he was assistant professor of pathology at the Army Medical School at Netley. On leaving Netley he went on duty in Zululand, where for two years he investigated nagana (the tsetse-fly disease of animals), which he found was due to a trypanosome conveyed by the tsetse fly. This discovery laid the foundation of most of the work which has been done in regard to the part played by insects in the propagation of malaria and other diseases. In 1903, following up Castellani's observations, he showed that sleeping-sickness is also due to a trypanosome conveyed by the tsetse fly. In 1911, he proceeded to Nyassaland as director of the Royal Society's commission to study the connection between the diseases of wild animals and of stock and human diseases. The results have already been reported in previous letters to THE JOURNAL.

The New Building of the Royal Society of Medicine Opened

The new building of the Royal Society of Medicine, which has recently been formed by the amalgamation of almost all the principal medical societies of the metropolis, has been opened by the king. The parent society of the new organization was the Royal Medical and Chirurgical Society, which was founded in 1805. For more than 100 years attempts were made to bring about amalgamation with other societies but without success. The new building, in Wimpole street, is architecturally an imposing example of the Greek revival in England. Its principal feature is the library on the first floor, which is 110 feet long, 27 feet wide and 18 feet high. The design of the building provides for another story with an annex for periodicals. On the ground floor are a spacious vestibule, two meeting halls, holding 500 and 250 persons respectively, patients' rooms, cloak rooms and cashiers' and porter's rooms. On the second floor are the council room and two committee rooms. On the third floor are a museum and laboratory. The basement is a store-room for books, capable of holding 100,000 volumes. The ceiling lamps in the library are so arranged that light is reflected first upward and then downward by the white ceiling. For the writing tables there is a novel lighting device suggested by Mr. MacAlister, the secretary. Realizing the inconvenience of the flexible cord hitherto in use he invented an apparatus which abolishes the old form of standard lamp attachment. It consists of a socket in the floor connected with the source of electric supply and plug in the leg of the table which fits into the socket. The plug is kept in position by a spring, the resiliency of which is overcome by the weight of the table. Thus the table always stands level when used in any other place than that in which it generally stands.

Tuberculosis and the National Insurance Act

It may be remembered that the national insurance act provides a large sum (87,500,000) for the establishment and maintenance of sanatoriums for tuberculosis. The government appointed a committee of specialists and health officers to report at an early date on the prevention and treatment of tuberculosis and to make recommendations on sanatoriums and other means of defense. The committee has just issued a unanimous report, in which the following principles are laid down: 1. Any scheme which is to form the basis of an attempt to deal with the problem of tuberculosis should be available by the whole community. 2. Those means which experience has proved to be most effective should be adopted for the prevention of the disease. 3. A definite organization should exist for the detection of the disease at the earliest possible moment. 4. Within practicable limits the best methods should be available by all suffering from the disease. 5. Concurrently with the measures for the prevention, detection and treatment, provisions should be made for increasing the existing knowledge of the disease and of the methods for its prevention, detection and cure by way of research. The committee recommends a scheme consisting of two closely connected units, the first being the tuberculosis dispensary and the second sanatoriums, hospitals, etc., in which institutional treatment is given. These are to be related to the general public health and the work of health officers and carried on in harmony with the general practitioner. The dispensary is to be a receiving house, a center of diagnosis and a general information bureau, as well as a center of curative treatment. It is calculated that one tuberculosis dispensary will be required for every 150,000 or 200,000 of the population in an urban center. In rural neighborhoods, where the population is scattered, the dispensary can serve only a smaller number. On this basis the number of sanatoriums required will be some 225 to 300. To the tuberculosis officer at the dispensary will come or be sent patients in every stage of the disease. As the work of the dispensary becomes better understood, persons with comparatively slight symptoms will be sent in greater numbers in order to ascertain whether or not they are tuberculous. Thus the possibility of early diagnosis will be much increased. When the diagnosis has been made, the dispensary will serve as a "clearing house" through which persons suffering from the various types of tuberculosis will be passed. They will be classified by the tuberculosis officer, who will have some beds at his disposal for the purpose of observation, and sent on to the appropriate institution. It is recommended that for the senior appointments in connection with the dispensaries and sanatoriums, preference be given to doctors who have held house appointments for at least six months in a general hospital in addition to a similar period at a special institution for the treatment of tuberculosis. The committee holds that the capital outlay on a dispensary when an existing house can be obtained should not exceed $1,250. Dealing with the second unit of the scheme—sanatoriums, hospitals and other institutions—a large proportion of cases of both pulmonary and non-pulmonary tuberculosis will require treatment for a longer or shorter period in an institution. It is estimated that one bed in a sanatorium should be available for every 5,000 of the population and the cost of maintaining it $6 or $7 a week. Great importance is attached to the proper treatment of children, since the more the resistant power of children is increased the lighter will be the burden of tuberculosis in the next generation.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, May 24, 1912.

Treatment of Typhoid Fever by Rectal Injection of Killed Cultures of Eberth's Bacillus

After proving that the introduction into the large intestine of killed cultures of Eberth's bacillus at 56 C. renders man and animals immune to typhoid it occurred to Dr. Jules Courmont, professor of hygiene in the Faculté de Médecine de Lyon, and to Dr. Rochaix to treat typhoid in the same manner. In a meeting on May 17, they reported the results obtained by this treatment. Of 171 typhoid patients treated in the usual way, twenty died, a mortality of 11.6 per cent. Of thirty-nine patients who received daily until defervescence two injections of 100 c.c. of culture only two died—a mortality of 5 per cent. Moreover, many cases were materially shortened, defervescence occurring prematurely and unexpectedly. Eight patients relapsed, but all were cured.

An Institute of Hydrology at Toulouse

The Université de Toulouse has undertaken the establishment of an institute of hydrology, in which all questions relative to mineral waters will be studied. The city of Toulouse has presented to the university the ground on which the future institute will be built. A circular, signed by the rector of the university and by the dean of the Faculté de médecine de Toulouse, has just been sent to all the mayors of the region asking them to indicate in what way the municipalities would be willing to participate in the construction and operation of the new institute.

Pathology of Prehistoric Man

At the last meeting of the Académie des Sciences, Dr. Marcel Baudouin, former general secretary of the Société préhistorique de France, gave an interesting report on the pathology of prehistoric man as shown on bones uncovered in the neolithic sepulture of Vendrest (Seine-et-Marne). These bones show characteristic osteo-arthritis deformans. On the vertebral column in women the lesion is located at the center of the

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cervical region, more often to the left than to the right. In men, on the contrary, it is observed usually at the base of the dorsal portion and at the center of the lumbar portion, located almost always to the right.

Deforming osteo-arthritis seems to be the oldest of all known diseases. Its existence has been proved in a non-domestic animal, the cave bear, in the very beginning of the oldest quaternary period. It is known, moreover, that it has been found recently in the Egyptians and the Nubians of the prehistoric period.

The Protection of Childhood

Since 1874, the laws concerning the protection and relief of infancy and adolescence have increased. The superior council of the Public Charities (Assistance Publique) and the societies for the study of charity have many times expressed the desire that this large collection of obscure and mutually contradictory laws might be methodically codified. The President of the Republic has just appointed an extraparliamentary commission for the purpose. The commission will not only collect and classify the existing laws, but also propose new and complemental provisions.

The Value of Antitetanus Serum

The Société de chirurgie has spent several meetings in discussing the value of antitetanus serotherapy. Dr. Riche reported the case of a little girl of 8, whose left hand was punctured by a pitchfork. The wound was small, uncomplicated, not inflamed or suppurating and painful only on pressure. A dressing of hydrogen peroxid was applied; then a subcutaneous abdominal injection of 10 c.c. of antitetanic serum was made. On the same evening the condition of the little girl became extremely critical. She was attacked with headache, diarrhea, vomiting and was in a state of increasing torpor; the body was covered with profuse, cold perspiration and the child was insensible to moderate stimulation. The abdomen was soft, neither sunken nor distended; the respiration was of the Cheyne-Stokes type; the pulse was soft and so rapid that it could not be counted. In spite of injections of caffein, of hot wrappings and of an injection of salt water the little girl died. Anaphylaxis was out of the question, for there had been no previous injection of any serum. The inevitable conclusion, then, is that death was caused by intoxication through antitetanic serum.

In reply to Professors Schwartz and Kirmisson, who declared that a single observation of this kind could scarcely discredit antitetanic serum, Dr. Riche mentioned the observation of Drs. Vennat and Micheleau regarding a colleague of Saint-Martin-de-Ré who, in attending a tetanic woman, received some drops of saliva on the face and in particular on a little excoriation of the nose; fearing infection, this physician, consequently, on the following day, made an injection of 10 c.c. of antitetanic serum and, a fortnight later, died of tetanus.

On the other hand, Dr. Delbet, professor of clinical surgery of the Faculté de médecine de Paris, has reported that he also has observed a case of death immediately following a preventive injection of antitetanic serum. The case was that of a man admitted to the hospital in the morning with a complicated fracture of the bone of the leg, dating from the evening of the preceding day. In the morning he showed some symptoms resembling those of delirium tremens. An injection of 50 c.c. of serum was given and, some minutes later, he was attacked by a crisis of excitement with tonic and clonic contractures. These symptoms were quieted, the patient regained consciousness and it was learned that he was subject to similar crises. At 3 p. m., however, he died suddenly without giving any indications of morbid symptoms.

Dr. Robineau, although declaring himself wholly convinced of the efficacy of antitetanic serum, has also reported observation of toxic symptoms due to this serum. This was the case of a colleague who had received a contused wound on the knee. He applied a dressing of tincture of iodin and, fearing tetanus, gave an injection of antitetanus serum. At the end of thirty-six hours, he was seized with chills, nausea, headache and presented some tachycardia. The symptoms persisted the following days with a temperature of 38 to 39 C. (100.4 to 102.2 F.) in addition. On the eighth day, at the site of injection, appeared a spot of urticaria and the patient was seized with rheumatic joint pains. On the twentieth day, the symptoms disappeared, but, on the following day, inflammation of the left saphenous vein developed and, some days later, of the right saphenous vein. The wounds were healed in fifteen days and have always had a good appearance. The serum was fresh, delivered the evening before by the Pasteur Institute, but it was labeled veterinary serum.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, May 24, 1912.

Personal

Professor Bach, director of the eye clinic at Marburg, died in that city, May 10. He was for many years a pupil of the Berlin ophthalmologist, v. Michel.

Professor Bernhard Naunyn, the well known clinician, celebrated the semi-centennial of his doctorate, May 23.

Prof. Carl Fraenkel, director of the hygienic institute of Halle, a pupil of Robert Koch, has changed his name to Fraenken with the consent of the government. Such changes of name are not very unusual in Germany. One of the most remarkable cases concerned the Nobiling family, whose members, on the occasion when Emperor William I was severely wounded in an attack by a man named Nobiling, preferred to abandon their former name and select another. In many cases changes of name occur among the baptized Jews, who seek in this way to conceal their former religion and race. It may be that such a reason is effective in Professor Fraenkel's case. It is remarkable that although he changed his religion many years ago, he has only now decided to change the "l" into an "n." The delay is possibly connected with the death of his uncle Bernhard Fraenkel, the noted laryngologist, in that he did not care to change his name during the lifetime of the latter.

Twenty-Five Years of Official Medical Organization in Prussia

The Prussian Aerztekammern (medical chambers) celebrated their twenty-fifth anniversary May 25. The ministerial edict which provided for the organization of the medical chambers twenty-five years ago, stated that physicians wish for a recognized national representation of their profession because they appreciate that, as a rule, it has not been possible for the medical profession to meet by unofficial organization the dangers which the advance of commercial life in late years has brought with it for the prestige and honor of the medical profession. On the other hand it is expected that the authoritative position which the national recognition of a representation of the medical profession will confer, will make it possible to connect with this organization institutions which are suited to meet the long cherished wishes of physicians, as for example, the desire to provide for the care of the widows and orphans of physicians. In addition to this, the growing importance of the public health service has made it more and more felt that there is need of an organization by means of which the rich experiences of unofficial physicians may be directly utilized in solving the national problems in the field of public health. Without doubt the activity of the Kammern has corresponded to the purposes just sketched. They have been effective in the service of the public health as well as for the uplifting of the professional conscience and the promotion of true fellowship. Particularly, by the later establishment of the courts of honor an institution was created by which the ethical standards of physicians in Prussia have been materially promoted. Especially in the struggle of the physicians with the Krankenkassen, the medical chambers have exerted a favorable influence. Finally the Aerztekammern by the establishment of the bureaus of relief for needy colleagues and their survivors have rendered great service in the field of professional philanthropy.

Opening of the Haeckel Museum for the Study of Phylogeny

The Phyletic Museum founded by Haeckel at Jena was formally inaugurated May 21. The idea of founding such a museum occurred to Haeckel in 1904, and he made the first contribution by devoting to it the royalties for his book "Welträtsel" (The Riddle of the World), of which hundreds of thousands of copies were published. By contributions from friends and admirers, he succeeded in pushing his plan so far that on the occasion of the 350-year jubilee of the university of Jena a few years ago, the building for the museum was ready. The outfitting of the building with material was undertaken by his successor and pupil, Professor Plate, after Professor Haeckel had resigned his professorship on account of his health. The museum which is open to the public contains extraordinarily valuable material for the exposition of the theory of development. By numerous specimens and objects the variability of species, the geographical distribution of varieties, polymorphism, the questions of heredity, the effects of inbreeding and cross-breeding and Mendel's law are demonstrated in an instructive way.

Left-Handedness in the German Army

The question of the importance of left-handedness, so far as the condition of the nerves is concerned, has repeatedly been discussed by German physicians in the literature of late years. As a rule this peculiarity is regarded as a sign of degeneration,

although this view has been opposed by some. In the last number of the *Klinisches Jahrbuch*, Dr. Stier, staff surgeon to the Kaiser Wilhelm Academy in Berlin, published the results of official investigation of the left-handed recruits in October, 1909. The entire number of recruits examined was about 260,000. Among them 10,300 left-handed persons were found. Those entering as one-year volunteers showed by far the fewest and the reserves (*Ersatzrekruten*) by far the largest number, a difference which, as is seen from other statistics, must be interpreted as an indication of the inferior efficiency of left-handed people. Comparison of the male and female left-handed relatives of our soldiers shows that left-handedness is nearly twice as common among males as among females, a fact that is readily explained by the assumption of a greater unilateral differentiation of males and of the increased difficulty with which they change their habits in childhood. Left-handedness is decidedly a hereditary peculiarity, being found nearly five times as frequently among the relatives of left-handed soldiers as among others. The number of those who have left-handed relatives and the number of such relatives per person, is greatest in southern Germany and least in northern Germany. The influence of the mother in heredity seems to be greater than that of the father. The number of physical stigmata of degeneration was found twice as great among the left-handed as among the right-handed. Present and past difficulties of speech are found in left-handed soldiers four times as often and among their relatives three to four times as often as among right-handed men. The proportions of the sexes among the stammering relatives shows that stammerers are found four times as often among men as among women. A small but still notable percentage of left-handed soldiers could write with the left hand better or nearly as well as with the right, an indication of the superiority which the right side of the brain may attain.

Berlin Radium Institute

May 13 the new institute for biologic and therapeutic investigation of radium, attached to the Charité, was opened by the director of the institution, Professor His, who delivered the inaugural address. The institute has been founded solely by private enterprise, contributions to the extent of $5,000 (20,000 marks) a year having been guaranteed by the Kaiser Wilhelm Association for the Advancement of Science (Gesellschaft zur Förderung der Wissenschaften) and by two radium firms. The two industrial firms are also prepared to furnish the necessary material and measuring apparatus. Naturally, with these slender means, the institute has not been able to erect its own building, but is installed in a rented house in Luisenplatz, in the neighborhood of the Charité. A policlinic is connected with the institute, in which representatives of the related specialties will hold clinics, so that by mutual consultation the most appropriate methods of treatment may be determined for each individual case. Fifteen work places are provided in the laboratory, which are also placed at the disposal of foreign physicians. There are two assistants to the director of the institute.

Recognition of an American Dental Degree

The question as to how far a dental degree obtained in America may be used in Germany has lately been again the subject of attention by the court and officials. The superior court (*Oberlandsgericht*) of Hamburg has decided that a person who has received a license to practice dentistry in America may not be forbidden to designate himself as "a dentist licensed in America" (*in Amerika approbierter Zahnarzt*), for this title contains no incorrect statement calculated to mislead. In northwestern Germany everyone will understand by this title merely that the advertiser is an educated dentist who has been admitted to practice in America on the basis of legal evidence of his qualifications, but no one would understand that he was a person who had been educated in America in the German manner and according to the requirements established in Germany. The opinion of the Prussian superior court expressed some time ago with reference to American dentists, was less favorable. A dentist was required by the police to remove from his sign the expression "Dr. of dent. surg." He declined to do this, with the claim that he had obtained this title from a reputable college in America. The court decided on the evidence presented that the institute in question was not a fraudulent institution, but must be regarded as inferior as compared with the German scientific institutes, and that for this reason the action of the police was justified, but that the matter would be different if the American college had stood approximately on the same scientific level as the German institutions of the kind.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, May 24, 1912.

The Problem of the Locum-Tenens and the Assistant in the Clinic

Two important questions, which have often been a source of much dissatisfaction in the profession, are now nearing a solution acceptable to all concerned. The organization of practitioners in Lower Austria has resolved to regulate the difficulties arising from a locum-tenens not being available in urgent cases. For a certain district of the country, containing about 1,000 physicians, there will be appointed five physicians, preferably those with good hospital experience, who will receive a fixed salary of 200 kronen a month, besides, of course, free board and lodging and all traveling expenses. They will be prepared to substitute, at a day's notice, for any physicians requiring them. Heretofore, it has been impossible at times and in certain places for a physician to leave his duties for any length of time; hence, he had no holiday. By means of this institution at least fifty physicians will be able to get a month off each year, if the *loca tenentes* are engaged for ten months each year. Of course, if the length of holidays are cut down and if the arrangements work well, over double the number of physicians may enjoy a vacation of a fortnight free, heretofore an unknown thing to many country practitioners. The physicians serving as *loca tenentes* will be eligible after three years to fill any vacancies as district officers of health. The funds necessary for the payment of these physicians will be raised by a slight increase of the yearly subscription for the organization premium.

The other question, now regulated, deals with the abuse of appointing clinical assistants *ad libitum*. In this country titles are much valued and many a physician is eager to become assistant to one of the clinics or to one of the eminent professors. The public believes that a physician who holds such an assistantship is superior to one who has no such position. The title of assistant was given originally only to those men who really assisted a clinical teacher in his scientific researches and, therefore, had no time for private practice. Recently a professor created fifteen assistants at a time. Of course, the profession protested against the wholesale fabrication of superior doctors. The *Collegium* of the clinical professors of Vienna has dealt with these conditions and resolved that in the future no increase of such titles should be granted except in really necessary cases; furthermore, that all assistants should be paid after a uniform scale, so that the fictitious assistant would die out. The latter men will be called aspirants; men who aspire to become assistants by due work of a scientific nature, requiring their full time to be spent in hospital work, and who may or may not prove themselves worthy of obtaining the title formerly so honored and coveted. By this plan, it is thought, the production of titles will be restricted.

Marriages

WILLIAM SHEPHERD HALL, M.D., Baltimore, to Mrs. Katherine Turner Kurtz, Roland Park, Md., at Philadelphia, June 1.

WILLIAM T. GOCKE, M.D., Adamstown, W. Va., to Miss Clara Agnes Boyle, Johnston, Pa., at Baltimore, May 29.

JOHN M. WHEELER, M.D., New York City, to Miss Julia Warren Smith, at Burlington, Vt., May 15.

EARL HOUSTON HUNT, M.D., Clarksville, Ark., to Miss Tot Hutchinson, at Van Buren, Ark., June 1.

JESSE SOLOMON SPILLYARDS, M.D., Shreveport, La., to Miss Alline Frey, Nashville, Tenn., Feb. 22.

JAMES WALTER WELLS, M.D., Waltonville, Ill., to Miss Bertha Hartley, Ina, Ill., recently.

CLARENCE C. ROGERS, M.D., to Miss Jennie Minerva Roth, both of Rittersville, Pa., June 1.

ESTILL VICTOR WEDDING, M.D., to Miss Eva Frances Baer, both of Kansas City, May 21.

MILTON SUMNER MARCY, M.D., to Miss Jessie Leora Cullom, both of Peoria, Ill., May 21.

WILLIAM WILLIAMS, M.D., to Miss May Marie Gale, both of Chicago, May 29.

JOHN ALFRED GRAHAM, M.D., to Miss Beatrice Felt, both of Chicago, June 4.

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Deaths

Beverley MacMonagle, M.D. Harvard Medical School, Boston, 1876; a member of the American Medical Association and of the Massachusetts Medical Society; for thirty years a practitioner of San Francisco and one of the surgical staff of the Woman's Hospital of that city; an instructor in the University of California for ten years; a member of the staff of the Children's Hospital at San Francisco; died in Paris, France, May 22, aged 58.

Albert Moore Shoemaker, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1900; a member of the American Medical Association and the Medical Society of the State of Pennsylvania, of the National Association for the Study and Prevention of Tuberculosis and of the Luzerne County Medical Society; a member of the visiting staff of the White Haven Sanatorium; died at White Haven, Pa., May 18, from tuberculosis.

Myron W. Robinson, M.D. Berkshire Medical College, Pittsfield, Mass., 1861; a member of the American Medical Association and of the Massachusetts Medical Society; resident physician of the Soldier's Home at Noroton Heights; a veteran of the Civil War and Medical Director of the Department of Connecticut, G. A. R.; died at his home in Noróton Heights, Conn., May 27, from heart failure, aged 72.

John Cowan Bogle, M.D. University of Louisville, Medical Department, 1878; a member of the Kentucky State Medical Society and the American Medical Association; for fourteen years physician for the Deaf and Dumb Institute at Danville; surgeon for the Cincinnati Southern Railway Company; for thirty years a practitioner of Danville; died at his home in that city, May 26, aged 63.

George F. Foster, M.D. Starling Medical College, Columbus, 1873; a member of the American Medical Association, of the Ohio State Medical Association and Delaware County Medical Society; for twelve years a member of the board of censors of the Columbus Medical College; died at his home in Olive Green, O., from apoplexy, aged 65.

George Fletcher MacDonald, M.D. Western Reserve University, Medical Department, Cleveland, 1886; a member of the American Medical Association and of the Medical Society of the State of Pennsylvania; an active worker in the Cambria County Medical Society; died at his home, in Gallitzin, Pa., May 22, from cancer.

R. Y. McLeod, M.D. Medical College of the State of South Carolina, Charleston, 1861; a member of the South Carolina Medical Association; first lieutenant Company E, 19th South Carolina Volunteer Infantry, C. S. A., and since the war a practicing physician at Bishopville; died in that city, May 17.

Thomas E. Moorman, M.D. Medical College of Virginia, Richmond, 1860; a member of the Medical Society of Virginia; who retired from active practice a number of years ago because of feeble health; died at his home in Theta, Va., recently, aged 78.

Josiah R. Bromwell, M.D. University of Maryland, School of Medicine, Baltimore, 1871; a member of the American Medical Association and of the Medical Society of the District of Columbia; died at his home in Washington, D. C., May 25, aged 70.

Thomas S. Terrell, M.D. Missouri Medical College, St. Louis, 1869; a member of the Southwestern Kentucky Medical Association; a veteran of the Civil War; of Mayfield, Ky.; died at the home of Dr. George T. Fuller, in that city, May 3, aged 69.

Gail Samuels, M.D. Baltimore University School of Medicine, 1897; formerly a practitioner at Bartlesville, W. Va.; a member of the West Virginia State Medical Association; died at his home in Parkersburg, W. Va., recently.

H. M. Sherman, M.D. American Medical College, St. Louis, 1878; a veteran of the Civil War and for nearly forty years a prominent physician in Peoria, Ill.; died at the Proctor Hospital, May 16, from Bright's disease.

John A. Wood, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1858; a pioneer physician of Coffeyville, Kan.; died at the home of his daughter in that city, May 23, from heart disease, aged 78.

Richard E. McVey, M.D. Rush Medical College, Chicago, 1861; a member of the Kansas Medical Society; died at his home in Topeka, Kan., May 23.

Dexter R. Belding, M.D. Cleveland University of Medicine and Surgery, 1869; died at his home in Malone, N. Y., May 18, aged 66.

Mercer W. McCrary, M.D. Vanderbilt University, Medical Department, Nashville, 1905; health officer for Cannon County for six years; died at Louisville, Ky., April 23, after a surgical operation, aged 34.

James O. Ray, M.D. Medical Department of the Tulane University of Louisiana, 1885; of Opelousas, La.; a member of the Louisiana State Medical Society; died at his home, May 21, aged 57.

Charles B. Trigg, M.D. St. Louis College of Physicians and Surgeons, 1898; a member of the Johnson County Medical Society; died at his home in Ozark, Ill., April 12, from appendicitis, aged 44.

Howard Parker, M.D. Kentucky School of Medicine, Louisville, 1897; of Edgar, Ill.; a member of the Illinois State Medical Society; accidentally shot himself and died, May 23, aged 38.

Elizabeth J. T. Gould, M.D. Woman's Medical College of the New York Infirmary for Women and Children, 1873; died at her home in East Orange, N. J., May 25, from nephritis, aged 69.

Gardner Cox, M.D. University of Michigan, Department of Medicine and Surgery, 1868; died at his home in Holyoke, Mass., May 2, from heart disease, aged 68.

Walton Bancroft, M.D. Homeopathic Medical College of Missouri, St. Louis, 1860; died at his home in Keokuk, Ia., May 16, from pneumonia, aged 74.

Harvey D. Borts, M.D. State University of Iowa, College of Homeopathic Medicine, Iowa City, 1896; died at his home in Iowa City, May 21, aged 46.

George A. Underhill, M.D. New York University Medical College, 1883; died at his home in Nashua, N. H., April 1, from edema of the brain, aged 55.

William J. Whiteford, M.D. University of Vermont College of Medicine, Burlington, 1889; died at his home in Schenevus, N. Y., April 19, aged 55.

George W. Weisel, M.D. University of Pennsylvania, Philadelphia, 1865; died at his home in Williamsport, Pa., May 20, from paralysis, aged 58.

Joseph William Dwyer, M.D. College of Physicians and Surgeons, 1900; died at the Passaic General Hospital, Passaic, N. Y., May 27, aged 52.

W. W. Newsome, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1863; of South English, Ia.; died in Corpus Christi, Tex., May 24.

Joseph N. Johns, M.D. University of Pennsylvania, Department of Medicine, 1870; died at his home in Seaford, Del., May 1, aged 68.

William D. T. Ferguson, M.D. Medical Faculty of McGill University, 1888; died at his home in Hamilton, Can., from heart disease.

William M. Houf, M.D. Missouri Medical College, St. Louis, 1884; a retired practitioner of Farmersville, Mo.; died May 20, aged 60.

Correspondence

The Control of the Clinic Patient

To the Editor:—There is no clinical worker who has not at some time during his experience as an investigator had the misfortune to be unable to locate some particular patient in whom he is scientifically interested. At times this is a serious drawback in regard to the administration of new remedies (salvarsan being a good example), the effects of operative procedure, obscure cases for diagnosis or unusual cases seen only at the clinics, and so forth. In order to locate such cases, dependence must be placed in some hospital employee to look up the address given by the patient or the address of the nearest relative, if given, when he has failed to find that of the patient. The results by postal service are about as unsatisfactory, letters being promptly returned to the sender. These means failing, the physician himself takes up the hunt. If fortune smiles on him, he may by interviewing many neighbors in the immediate vicinity of the first address find that the person whom he seeks has removed, possibly to the opposite side of the town. Joyously, the scientifically inclined man rushes off on the new trail, only, in many instances, to be again disappointed. After untiring

efforts and the expenditure of valuable time and money, he at last resorts to advertising in one or more of the daily newspapers, with more expense and most frequently no favorable returns.

To mention business in any relation to medicine is veritable heresy, but it must be a very dull man indeed who cannot see that active business methods are being used by every one but the physician. The hospital in which he labors is run by business men; insurance companies are run by business men who formulate questions of a very searching nature for the physician to answer when he has any dealings with them through the decease of one of his patients. The local board of health in his own city or town demands very business-like answers to many important questions when he has to deal with a case of infection or contagion, and woe betide him if he does not answer in a very business-like way! In these things there is system, and the medical man is made to abide by it; but when it comes to devising anything to lighten the burdens of the medical man he finds that there is very little system that he can call on for his own aid or benefit. This is to be deplored, as many interesting cases are lost sight of which, if reported, would be of interest not only to the one so reporting the case, but to the medical profession, and possibly of value to humanity at large.

The great handicap—in this country, at least—is the absence of a systematic record of any patient, no matter in what walk of life he may be. The insurance companies, no doubt, have better records than any business concerns. They are vitally interested in preventive medicine, and are only too glad to further any scheme to increase the longevity of any who are insured by them. Though their motives may not be entirely humanitarian, the fact remains that the removals of all those insured by them are accurately recorded, as at regular intervals certain moneys must be paid in order to keep up the insurance. It is really surprising to learn how many hospital patients carry life, health or accident insurance policies, or combinations thereof. Would an insurance company give a physician the address of a patient in whom he is interested if they had it? This would necessitate asking such patients whether or not they were insured. If the answer is in the affirmative and the name of the company is obtained, the doctor could then communicate with the company, giving his reasons for doing so; or, if he prefers, he may wait, and if at any time he loses the address of the patient he may then seek the aid of the company. The former method is the more rational, as then the company would have an interest in the proceedings, and in the event of death could notify the physician, who might not hear of it for a long time after and who in the meantime may have reported favorably on the case, as he would not have done had he known the full course of the condition. This is very important, as statistics are beyond a doubt misleading, not owing to the fault of the compiler, but to erroneous facts honestly given. The insurance companies, if they would, could be of great aid to the physician in these matters, for once a person is insured and pays his premiums he can be located, no matter in what part of the country he may live.

Our medical brethren of the German-speaking countries have their work in this particular direction greatly facilitated by their wonderful police system. Any one who has lived in or even traveled through these countries can attest to this system. Even the tourist is compelled to give a fairly good account of himself, but when one remains for any length of time (especially if living in a pension or with a private family), he then becomes an inhabitant of that particular town in which he resides, and a complete record of him is made. Therefore, when a person changes his place of abode the police department is not only notified of the arrival at the new address, but is also notified of the departure from the old one. On application to the police department, when giving a good reason, any one may obtain the address of another. This is of very practical use to the physician in following up important cases when it becomes necessary to do so. Inhabitants of these countries know that they can be located quickly, and are therefore more easily controlled.

To utilize the local board of health with its police powers seems to be the rational method of handling the problem in this country. This may seem a wide divergence from the functions of the board, but as the reporting of all cases of so-called social diseases is now being contemplated it would not materially increase the burdens of the board to have a few names added to the list. The method of compelling such patients to keep the board informed of their places of residence would, no doubt, be similar to the method of handling struggling or busy physicians—fine or imprisonment when failing to report one of the many reportable diseases. In fact, a new branch of the board of health might be formed—namely, a sort of hospital clearing-house. If a person, whether in medicine or not, would examine the annual reports of two or more hospitals and, selecting any common condition, add up the total number of such cases treated by each hospital, he might be appalled at the number. This is due to the fact that probably more *cases* than *patients* exist suffering from that particular condition. The explanation of this is easy. There are a great number of wandering clinic patients who patronize one hospital and then another, as the whim moves them. In fact, one clinic patient, while removing the clinic card from his pocket, inadvertently removed another one for a similar clinic at another hospital, and on being questioned admitted that he was being treated at two hospitals for the same condition, thus receiving treatments daily. This instance goes to show how fallacious are hospital reports regarding patients unimproved, improved or cured. It also shows that those who support hospitals and those who are giving their time to the hospitals are having their good efforts negatived to a great extent by the very ones who are the recipients of these kindnesses.

If the hospitals were required to report daily to the clearing-house branch of the board of health all new charity patients treated by them, and this rule were rigidly enforced, the public would soon learn to abide by the ruling. In this way thousands of dollars could be saved out of the millions that are annually spent in the larger cities. Not only this, but the pauperization of the public would be reduced to a minimum. That hospital abuses exist, out of proportion to the amount spent for real charity, is known to all who are actively engaged in clinical work. Laboring under such unsystematized efforts puts the medical profession in the rear ranks for up-to-date methods. If a new department of the board of health were feasible, much could be done in certain localities. The problem is not going to be solved this year, nor possibly next, but it is high time some concerted action is taken to better the conditions.

To inject a little system, not to say business method, into the following up of the after effects of treatment or operative procedures, or the keeping track of interesting cases, cannot be a terribly unethical departure.

FRANCIS W. WHITE, M.D., New York.

Strasburg

BERLIN, April 20, 1912.

THE UNIVERSITY OF STRASBURG

To the Editor:—The University of Strasburg under the German régime has taken a new lease on academic life and is surpassing in brilliancy its career as a French school. The German government is on its mettle to demonstrate that Prussian direction means no decadence for the old French university, and has consequently picked out many of the most brilliant minds of Germany to guide the destiny of this most recent offshoot of Teutonic learning. The medical department of the university has been built up with special care. Madelung holds the chair in surgery, Erich Meyer in internal medicine, Czerny in pediatrics, Wollenberg in neurology, Fehling in gynecology and obstetrics, Wolff in dermatology, Adrian in genito-urinary diseases, Hertel in the eye, Manasse in ear, nose and throat. Other well-known names are Bethe in physiology, Schmiedeberg in pharmacology, and Schwalbe and Weidenreich in anatomy.

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THE PATHOLOGIC INSTITUTE

The work of the modern hospital centers about the pathologic institute. The position of pathologist in the modern university is perhaps the most important and difficult properly to fill. In the case of Strasburg, the German government was unable to find the right man in Germany, and was forced to select an Austrian, the famous Professor Chiari of Prague, for the post.

The university hospital is located about a mile from the university in the poorer section of the old town. It is built on the pavilion plan. Many of the older buildings have steep roofs, with two or three tiers of dormer windows, and date back to French times, when dormer windows were much in vogue in order to escape the high governmental window tax. The pathologic institute lies in the center of the hospital grounds, where it is readily accessible from all the clinics. The institute averages 1,100 to 1,200 post-mortems annually, a thoroughly adequate material for gross, microscopic and bacteriologic purposes. The hospital now contains 1,300 beds.

The pathologic museum dates practically from Professor Chiari's arrival in Strasburg, but is already one of the features of the institute. It is arranged according to anatomic structures. A complete card-catalogue, cross-indexed, according to both organs and diseases, is kept in the room, together with the corresponding history file. The entire clinical and pathologic report of any case in the museum can be obtained by referring to this index. The museum is open to the workers and students of the institute at all times.

The autopsy room looks more like an operating-room than the usual morgue. The amphitheater for demonstrations to the students will compare favorably with the amphitheater in most surgical clinics. It is not unlike the new gynecologic amphitheaters in Vienna, though not so large. The lighting and seating arrangements are much the same.

A separate *Sektions-Saal* or autopsy room for contagious diseases and for cases requiring particular bacteriologic examinations is another source of pride to the professor. This is a valuable addition to the institute, and I do not see why this feature is not more in vogue in foreign institutions, to say nothing of those of our own country. The animal rooms are in the basement; the animal operating-room is also there—not an ideal location, but the only one at present available. Most of the professor's microscopic sections are cut and stained by his own *Dienerin*, a young woman whom he trained for the work, and who, so he says, can do the work better than he himself. The government has been very generous with the institute, and Chiari has never been hampered seriously in his work by lack of funds. Two new clinical buildings are to be added to the hospital in the course of the coming year. They will increase the capacity of the hospital by about 250 beds, and presumably increase the annual autopsies by approximately 200, as the professor naïvely remarked, with perhaps some satisfaction, for, like all others of the Vienna school, he loves to work on a big material.

PROFESSOR CHIARI

The *Diener*, who met me at the door of the pathologic institute, told me that he knew the professor would be glad to meet an American doctor. Did I want to see him? Of course I did, but I expected much aloofness, after the style of Vienna and Berlin. I was very agreeably surprised. Professor Chiari received me in his private laboratory and addressed me in very excellent English. When he found that I knew Frank Billings of Chicago, I had an established status at once, for Billings worked with Chiari in his student days in Vienna, when Chiari was assistant to the great Kundrat, and they have been fast friends ever since. When he found that I knew, also, Ludwig Hektoen, Robert Preble, H. G. Wells and other American students of former days, he had to get all the latest news about them before proceeding further. Then he took me through the institute. It is as large a place as the pathologic institute at Vienna, but more modern in its arrangement. Everything was spick and span. The professor declares that his only extravagance is cleanliness, and a surgical clinic could not be more immaculate than his institute.

His private library, which long ago outgrew the capacity of his home, has been installed at the institute for the use of the workers there, as well as for himself. He pointed out with particular pride his copy of the *Index Medicus*, something which one rarely sees in European libraries. It is sent to him annually gratis, a compliment he much appreciates. He thinks that he could not work without it now that he has become accustomed to it. If some of the other research workers abroad were more familiar with it, they might save themselves much time in hunting down literature, and might make their references easily more accurate than at present.

The professor cherishes particularly a little black notebook which dates from his recent American trip. It contains the names of those whom he met on his recent American trip, chiefly physicians and former students. It reads like a medical "Who's Who in America." There is scarcely a big name missing in the cities he visited on his trip. If he had done nothing else in his lifetime, he says, he would still feel satisfied when looking over that list, in feeling that he had played a part in making those careers.

FACILITIES FOR POSTGRADUATE WORK

Each of the assistants at the institute has a roomy private laboratory, and there are other laboratories for the various *voluntär Assistenten*, many of whom are foreigners. Chiari has only one American working with him at present, but wishes he had more. He almost invariably finds them hard and earnest workers and intelligent observers.

There is a splendid opportunity here for pathologists, young and old, to come for a longer period of study. In a year one could see about as many autopsies as in a decade in America. He could see them worked up in an almost ideal fashion, and get a most practical training in actual post-mortems and all the laboratory branches connected with them. In a year's time a careful study of the museum's preparations could be carried through, and much could be learned from the collection of microscopic specimens. Time would still be left for a *tuechtige Arbeit*. Clinicians can arrange readily to work half a day at the institute and a half day in one of the clinics, where they would be very welcome. An additional advantage of study in Strasburg for a longer time is that one has a good chance to learn both French and German while working on the patients, for both nationalities are well represented, though the *Elsässer Dietsch*, as they are called, predominate. The cost of living is half to two-thirds of that in Berlin or Vienna, and there is nothing to pay for courses.

ROGER T. VAUGHAN, Chicago.

Bismuth Paste in Acute Suppurations

To the Editor:—The casual reader of Dr. Emil G. Beck's "Warning Against the Indiscriminate Use of Bismuth Paste in Acute Suppurations" (THE JOURNAL, May 25, p. 1622) might infer that I had reported two cases of bismuth poisoning following intra-abdominal drainage by this method. I wish to clear up any ambiguity in this connection and to point out that the only case of serious poisoning was that following curettage of a lumbar sinus of considerable size, in which a large quantity of paste was injected immediately after operation; no provision had been made for drainage and the blood-vessels and lymphatics were still exposed. The case of slight poisoning was a fecal fistula opened retroperitoneally through the lumbar muscles.

In the eleven intra-abdominal sinuses there were no symptoms of poisoning or other untoward effects and while I am prepared to admit that there may be an element of danger in using the paste too soon in acute intraperitoneal sinuses, through the breaking down of newly formed adhesions, this objection is not worthy of consideration in localized intra-abdominal abscess cavities in which adhesions have been forming for months or years.

Every surgeon has encountered cases of secondary abscesses following our present-day methods of intraperitoneal drainage and it is just because these methods are not entirely satisfactory, either as regards painlessness or efficiency, that bismuth paste drainage suggests itself.

It requires very little pressure to inject the paste through a soft rubber tube—certainly not sufficient to break down adhesions of six or seven days' growth (four days in my cases) and such an accident is practically impossible in old abscess cavities. Where reasonable precaution as to the quantity, means of exit and gentleness in injecting is used, I believe the element of danger is negligible.

My results in chronic ulcers with ordinary bismuth paste were not encouraging. It has no advantages over other forms of treatment.

I have never applied dry bismuth to burns, hence cannot answer Dr. Beck's assertion with regard to poisoning in these cases, but it seems rational that, in any extensive burn, in which the area for absorption is great, other forms of treatment should be used.

F. MCKELVEY BELL, Ottawa, Can.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE METRIC SYSTEM IN PRESCRIPTION WRITING

To the Editor:—A ready and easily remembered method of writing prescriptions in the metric system is often desirable and very useful to one not thoroughly familiar with that system, or to one accustomed to using the apothecaries' system. If it will be remembered that 2 fluidounces are equivalent to 60 c.c. and that in each teaspoonful there are approximately 4 c.c., it is easily seen that there are fifteen teaspoonful doses in 2 ounces (or 60 c.c.), the amount most frequently prescribed. As there are approximately 15 grains in each gram (or each c.c. if liquid), it may readily be seen that for every gram (or c.c.) of the drug or medicine placed in a 60 c.c. mixture, each teaspoonful dose will contain 1/15 of 1 gm. or 1 grain of the drug or medicine. In this way it will be easy to compute quickly any desired dose. For instance:

R.	gm. or c.c.
Sodii bromidi	1
Aquæ dest. q. s. ad	60

M. ft. sol.

Sig. One teaspoonful in water t.i.d. p.c. Or, if a 2- or 5-grain dose is desired we would write for two or five times the 1 gram, which would read as follows:

	gm. or c.c.
Sodii bromidi	2 (or 5)
Aquæ dest. q. s. ad	120 (or 300)

M. ft. sol.
Sig. One teaspoonful in water t.i.d. p.c.

Or should a fraction of a grain be desired at each dose we take, for example, ¼ of 1 gm. (written 0.25 gm.) for a quarter-grain dose, or ½ of 1 gm. (written 0.50 gm.) for a half-grain dose, in the same total mixture of 60 c.c. Should it be desirable to write for more than 2 ounces (or 60 c.c), it is only necessary to double the figures in the prescription, writing 2 gm. for the drug and 120 c.c. for the menstruum, for a 1-grain dose. In brief, this method may be expressed in the following rule: In a 2-ounce mixture prescribe as many grams as the number of grains desired in a teaspoonful dose.

This system is especially desirable in making up percentage solutions, it being much easier to weigh out and place 1 gm. of a drug in 100 c.c. of liquid for a 1 to 100 solution, or 1 gm. to 1,000 c.c. for a 1 to 1,000 solution, than to compute and weigh out the amounts in grains and fluidounces or pints. The metric system is, after once being understood, so easy and accurate that I believe it would become more universally used, from choice, if it were more commonly taught in our colleges and more generally understood by the profession.

ALFRED G. FARMER, Gatun, Canal Zone, Panama.

ANSWER.—The method proposed by our correspondent is not altogether new; in fact, the relations are so obvious that the method must have occurred to many minds. We believe that it was published some years ago in some of the works on materia medica. It will do very well as a makeshift in learning to prescribe in the metric system, but such a makeshift is open to some serious objection. In the first place, the convenience of the method itself tends to hinder the person who is using it from becoming familiar with the metric system. A perfectly safe and easy use of the metric system is possible only to one who has learned his dosage in that system and who thinks in grams and milligrams rather than drams and grains. One who is not thoroughly familiar with the metric system runs the liability of serious errors in trying to convert one system into the other, and a misplaced decimal point may work so much harm that it is somewhat doubtful whether it is wise for the physician of the old school to attempt to make the change. We may hope that the present generation of physicians will adopt the metric system, but the use of the older system will probably continue long enough for those who are now using it to retire.

VASOSTOMY

To the Editor:—A number of times recently I have seen reference made in medical literature to the "Belfield operation." Am I correct in believing that it is an operation on the vas deferens? If so, please describe it or refer me to literature describing it.

B. E., Oklahoma.

ANSWER.—The openings of the ejaculatory ducts into the prostatic urethra are so minute that injection of solutions into the vesicle through them, even with the aid of the urethroscope, is not practicable. Hence the frequent gonorrheal and other infections of vas and vesicle were formerly beyond the possibility of local treatment, except by "stripping" the vesicle from the rectum (a procedure of limited benefit) and by incision through the perineum, an operation too formidable to secure general adoption.

Belfield found that though the front door to the vesicle—the ejaculatory duct—could not be opened for medication, the back door—the vas—could be utilized for this purpose. Experiments on the cadaver show that, if the vas be opened in the scrotum above the testicle, a watery solution injected toward the body flows without resistance into the vesicle, which it fills before escaping through the ejaculatory duct. In the living subject the filling of vas and vesicle was found to be equally easy, the injected fluid remaining until expelled by seminal emission. Thus if the injected fluid be an argyrol solution, the next ejaculation is black. By attaching the vas to the skin, the vesicle can be injected daily so long as desired.

This little operation, called "vasostomy" by its originator, requires only a half-inch incision in the scrotum, painless through local anesthesia. There is no difficulty in its performance if, before the skin is incised, the vas is found and fixed against the skin by two stitches a half-inch apart, each passed under the vas and tied above the skin. If this precaution be neglected, the vas is apt to slip from the fingers and may be recaptured with great difficulty, if at all. In this neglect is the explanation of failure in the performance of the operation.

Details may be found in THE JOURNAL A. M. A., April 22, 1905, p. 1277; *Surg., Gynec. and Obst.*, November, 1906; Watson and Cunningham: "Genito-Urinary Diseases," i, 292; White and Martin: "Genito-Urinary Diseases," p. 716.

UNRUPTURED HYMEN IN A MARRIED WOMAN

To the Editor:—We wish to report the following case: Patient is a married woman, aged 17, a twin. Her menstrual history was negative. She had been married six months, and when seen by us was having an abortion of a six weeks' pregnancy. Digital examination revealed an unruptured hymen, which was ruptured by introducing the finger into the vagina to ascertain the condition of the uterus. Her husband admitted that he had never been able to make entrance during coitus.

She weighs about 200 pounds, is of masculine build and features, with some hair on her face. Her labia majora and minora and her hymen were very much hypertrophied, and we believe that she had been an excessive masturbator before her marriage.

W. E. BOX, M.D., and B. P. EVANS, M.D., Quitman, Miss.

ANSWER.—The persistence of the hymen after marriage is occasionally observed. In many cases the membrane is distensible so that it escapes rupture in spite of coitus.

ANOTHER METHOD OF TONSIL DISSECTION

To the Editor:—Dr Marquis (THE JOURNAL, June 1, p. 1683) has recognized a difficulty in the use of most of the tonsil-forceps and is entitled to credit for the ingenious device in the shape of movable rings that enables the snare wire to be passed over the handle of the forceps. I have overcome quite satisfactorily the same difficulty in the use of two forceps, first using the Dean forceps to grasp the tonsil and pull it from its bed while making the dissection and then, without letting the tonsil drop back into its bed, using a modified White forceps, over which the snare wire has been placed, to get the most advantageous hold of the tonsil possible, after which I release the tonsil from the grasp of the first forceps. As a rule, an excellent hold can be obtained with the second forceps, and then the first forceps can be removed without trouble. The White forceps did not please me on account of the size and I had a new one made which is much smaller, being about 2 inches from the lock to the mouse-toothed extremity and 5 inches from the lock to the end of the handles. My offset, however, is still too great and in another forceps I would not have it exceed about ¼ inch.

J. C. MCALLISTER, Ridgway, Pa.

JOURNAL Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

THE FORWARD MOVEMENT IN MICHIGAN FOR HEALTH CONSERVATION

D. E. McClure, Detroit, Mich.

Assistant Secretary, Michigan State Board of Health

"Education is to know for the sake of living, not to live for the sake of knowing." This is the shibboleth of the Michigan State Board of Health under the leadership of Dr. Robert L. Dixon, Secretary.

What are we doing in Michigan? First and foremost, we are fertilizing public sentiment to a point where it will appreciate the tremendous importance of sanitary living, and this public sentiment, responding to the fertility, is enforcing sanitary regulations, environments and laws. Health conservation sentiment is better than specific law, since it is a law unto itself. How are we creating sanitary sentiment? Our venture, like that of the merchant of Venice, is not in one bottom, but we hope it will come into the haven of good health with one cargo—sanitary environments.

In Michigan we have eighty-three counties, each county having a county commissioner of schools who is at the head of the county school interests. A plea was made to each commissioner of schools by letter, asking his cooperation in establishing sanitary environments for rural schools, a pure supply of drinking-water and the individual drinking-cup, well-ventilated schoolrooms, sanitary outhouses (about 50 per cent. of the outhouses were found insanitary) and pleasant school grounds. The commissioners enlisted at once, and form now a cooperative committee in the work of sanitary education with the State Board of Health, and great progress has already been made in this direction.

In Michigan are 1,000 granges, with a membership of 70,000. Our next move was to enlist the grangers in the work of sanitary education; to constrain them to see the sanitary problem through the eyes of their commissioners of schools, and to have a common point of view. The results in this phase of our forward movement have been marvelous. Many of the granges appointed a committee on health, and the lecturers of the granges incorporated health topics in their programs. The lecturer of the state grange, Miss Jennie Buell, has prepared a special program for her quarterly bulletin. We have focused the eyes of the rural folk on the dangers threatening our civilization through insanitary environments.

Our next movement was to enlist the women's clubs. It is unnecessary to say that the response from this great force was almost spontaneous. The sociologic uplift, the appeal to mothers, the environmental value of preventive measures, enlisted the warm, hearty cooperation of the guardians of home and purity.

An appeal was made to the managers of railways to cooperate with the State Board of Health in providing sanitary coaches, sanitary closets on trains and at depots and the abolition of the common drinking-cup, and this part of the movement is going forward successfully.

We have enlisted the United Commercial Travelers in a campaign for better environments for hotels; outdoor and indoor closets, abandonment of the common roller-towel (Michigan, as yet, has no law against its use), better environments of railway depots and on railway coaches. Well, these boys are our flying squadron in sanitary education. They are getting results. We have enlisted the newspapers and the ministers of all the churches in the work.

Recently there has been organized an enthusiastic, efficient, active state health officers' association. This organization is the regular army of the forward movement for sanitary education. Such is the outline, in brief, of the work for health conservation in Michigan.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

ALABAMA: Capitol, Montgomery, July 9. Chairman, Dr. W. H. Sanders.

ARIZONA: Phoenix, July 1-2. Sec., Dr. Ancil Martin.

COLORADO: State House, Denver, July 2. Sec., Dr. David A. Strickler, 612 Empire Building.

CONNECTICUT: Regular, City Hall, New Haven, July 9-10. Sec., Dr. Charles A. Tuttle, 196 York Street; Homeopathic, Grace Hospital, New Haven, July 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Avenue; Eclectic, Hotel Garde, New Haven, July 9. Sec., Dr. T. S. Hodge, 19 Main Street, Torrington.

DELAWARE: State Society and Homeopathic Examining Boards, Dover and Wilmington, June 18-20. Secretary of Medical Council, Dr. Henry W. Briggs, Wilmington.

INDIANA: Room 57, State House, Indianapolis, July 9-11. Sec., Dr. W. T. Gott.

MAINE: State House, Augusta, July 16-17. Sec., Dr. Frank W. Scerie, 776 Congress Street, Portland.

MISSOURI: Gymnasium of the St. Louis University, St. Louis, June 24-26. Sec., Dr. Frank R. Hiller, State House, Jefferson City.

NEW HAMPSHIRE: State House, Concord, July 9-10. Regent, Mr. H. C. Morrison, State Library.

NEW JERSEY: State Capitol, Trenton, June 18. Sec., Dr. H. G. Norton.

NEW MEXICO: The Capitol, Santa Fé, July 8-9. Sec., Dr. J. A. Massie.

NEW YORK: June 25-28. Chief of Examinations Division, Mr. Harlan H. Horner, Department of Education, Albany.

NORTH DAKOTA: University of North Dakota, Grand Forks, July 2. Sec., Dr. G. M. Williamson, Grand Forks.

OHIO: Columbus, June 18-21. Sec., Dr. George H. Matson, State House, Columbus.

OKLAHOMA: Oklahoma City, July 9. Sec., Dr. J. W. Duke, Guthrie.

OREGON: Portland, July 1. Sec., Dr. E. B. McDaniel, 704 Electric Building.

PENNSYLVANIA: Philadelphia, Pittsburgh and Harrisburg, June 24-27. Secretary of Bureau of Medical Education and Licensure, Nathan C. Schaeffer, Harrisburg.

RHODE ISLAND: State House, Providence, July 11. Sec., Dr. Gardner T. Swarts.

SOUTH DAKOTA: Deadwood, July 10. Sec., Dr. L. G. Hill, Watertown.

TEXAS: Austin, June 27-29. Sec., Dr. J. D. Mitchell, Fort Worth.

UTAH: Salt Lake City, July 1-2. Sec., Dr. G. F. Harding, 310 Templeton Building.

VERMONT: Burlington, July 9-11. Sec., Dr. W. Scott Nay, Underhill.

VIRGINIA: Richmond, June 18-21. Sec., Dr. R. S. Martin, Stuart.

WASHINGTON: High School, Tacoma, July 2. Sec., Dr. F. P. Witter, Traders' Block, Spokane.

WEST VIRGINIA: Capitol Bldg., Charleston, July 8-10. Sec., Dr. H. A. Barbee, Point Pleasant.

WISCONSIN: Madison, July 9-11. Sec., Dr. John M. Beffel, 3200 Clybourn Street, Milwaukee.

West Virginia April Report

Dr. H. A. Barbee, secretary of the West Virginia State Board of Health, reports the written examination held at Parkersburg, April 8-10, 1912. The number of subjects examined in was 16; total number of questions asked, 170; percentage required to pass, 80. The total number of candidates examined was 15 of whom 11 passed and 4 failed. The following colleges were represented:

PASSED		
College	Year Grad.	Per Cent.
University of Louisville.....(1909) 82;	(1910)	80
College of Physicians and Surgeons, Baltimore....	(1911)	80, 85
Maryland Medical College.....	(1911)	80
University of Maryland.....	(1906)	82
Detroit Homeopathic College.....	(1911)	80
Jefferson Medical College..(1906) 82;	(1907) 80; (1911)	85
University of Virginia.....	(1910)	86

FAILED		
University of Louisville.....(1909) 67;	(1911)	72
Maryland Medical College.....	(1911)	75
Leonard School of Medicine.....	(1911)	70

The following questions were asked:

ANATOMY AND EMBRYOLOGY

1. Name the germ layers from which the following structures develop: skeleton, lungs, nervous system, blood, pancreas and hair. 2. Describe the venous system between placenta and right auricle. 3. Describe the tibia. 4. Describe the hip-joint. 5. Describe the femoral artery. 6. Describe the colon. 7. Give the origin, insertion and nerve-supply of the following muscles: psoas, subscapularis, pronator quadratus. 8. Describe the pneumogastric nerve. 9. Describe the left subclavian vein. 10. Name the cartilages composing the larynx and describe the vocal cords.

CHEMISTRY AND MEDICAL JURISPRUDENCE

1. What element composes over half the matter of the earth and is the common supporter of combustion? 2. What is the difference between analytic and synthetic methods in chemistry? Illustrate

each. 3. What pathologic conditions produce bile in the urine? 4. Mention several tests for sugar. 5. How does diet affect the elimination of urea? 6. What is methyl alcohol? What are its properties and uses? 7. Name some of the abnormal chemical constituents of urine. 8. In a case of infanticide how would you determine if the child was born alive? 9. If in a dead body rigor mortis has disappeared and hypostatic congestion is marked, what conclusion would you draw concerning the time that had elapsed since death? 10. What findings would lead you to conclude that a skeleton was that of a female?

PHYSIOLOGY AND HISTOLOGY

1. Describe the physical factors concerned in the production of blood-pressure and blood-velocity. 2. Give the physiology of the heart-beat and explain the cause of heart-sounds. 3. Describe the mechanism of respiration and give the innervation of the respiratory movement. 4. Discuss physiologically bacterial action in the alimentary tract. 5. Name the ductless glands and give the physiology of internal secretion. 6. What is the function of oxygen relative to the fluids and tissues of the body? 7. Give the function of the fifth, tenth and twelfth cranial nerves. 8. Give the histology of a lobule of the lung. 9. Give the histology of serous and mucous membranes. 10. Describe the histology of the skin.

BACTERIOLOGY AND HYGIENE

1. Bacteriology and hygiene: give definition. 2. Pasteur and Koch: who were they and what did they do for the study of bacteriology? 3. Describe phagocytosis, and what is meant by opsonic index? 4. Bacterial poisons: name three and describe them. 5. What is meant by infection and auto-infection? Give examples. 6. Water: name some of the impurities found in it, and how rendered pure and wholesome. 7. Describe the hygiene necessary in a tuberculous patient. 8. Give method of disinfecting bedding and clothing after small-pox, diphtheria and scarlet fever; and how soon should children be returned to school after having said diseases. 9. Which is to be preferred in vaccination, animal or humanized lymph? Why? 10. Venereal prophylaxis: what is being done to prevent venereal diseases?

OBSTETRICS AND GYNECOLOGY

1. Describe development of the placenta. What are its functions? 2. Give the dimensions of the pelvic inlet and outlet. 3. When and where are the fetal heart-sounds best heard? Describe them and give their rate. 4. How would you differentiate pregnancy, ovarian disease, ascites and gaseous accumulations? 5. What is a "head last" labor? Give cause and management. 6. Describe Alexander's operation for shortening the round ligaments. Under what conditions is it justifiable? 7. What complications may arise in a twin labor and how may they be overcome? 8. To what dangers in pregnancy and labor does gonorrhea of the mother expose her and her offspring? Give treatment of ophthalmia neonatorum. 9. Give the pathology, symptoms, causes and treatment of eclampsia. 10. Name the important forms of hemorrhage occurring in obstetric practice.

SPECIAL PRACTICE

1. State four local and four general causes of epistaxis. 2. What structures are involved in hypertrophic rhinitis? Give symptoms and treatment. 3. Define ptosis, strabismus, diplopia, myopia, hypermetropia, presbyopia and chalazion. 4. Define, give etiology and treatment of pink-eye. 5. Define aphonia and give its common cause. 6. Give the most important points in differential diagnosis between follicular tonsillitis and diphtheria. 7. What is the condition in apoplectic coma and what reflexes are commonly affected? 8. Define and give etiology of neuritis. 9. On what signs and symptoms would you make an early diagnosis of pulmonary tuberculosis? 10. Describe the methods of physical diagnosis.

SURGERY

1. Name the different kinds of wounds. 2. Give symptoms and treatment of hemorrhage at base of the brain following injury. 3. Define fracture and give the causes. 4. Describe in detail the operation for hemorrhoids. 5. Define hematocele, meningocele and encephalocele. 6. Outline the treatment of empyema. 7. Describe in detail the operation for varicocele. 8. Give the methods and dangers of dealing with adhesions. 9. Give the indications and methods of stretching the great sciatic nerve. 10. Describe in detail the method of skin-grafting.

MATERIA MEDICA AND THERAPEUTICS

1. What are the therapeutic uses of iron? 2. Define: (a) cardiac stimulants; (b) cardiac sedative; (c) cardiac tonic. Give examples and dose of each. 3. Give origin of podophyllin, its action and dose. 4. Give the physiologic action of digitalis. Differentiate the action of digitalis and strophanthin on the circulation. When indicated? 5. Give the physiologic properties and antidote of oxalic acid. With what drug may it be confounded? 6. What is the physiologic action of opium and toxic effect? 7. Name four drugs of the vasomotor group. 8. What is a hypnotic? Specify three in common use and dose of each. 9. Name the official preparations of arsenic and give the dose of each. 10. Give the physiologic effects of aconite and treatment of poisoning.

PRACTICE OF MEDICINE AND PEDIATRICS

1. Acute pleurisy: give the physical signs and symptoms. 2. Give cause and symptoms of biliary colic and differentiate from appendicitis. 3. Give treatment with prescription for a case of acute articular rheumatism. 4. Differentiate organic and functional heart murmur. 5. In acute indigestion resulting in cholera morbus, what would be your first plan of treatment? 6. How would you diagnose and treat a case of gastric cancer? 7. Describe the most important symptoms of cerebrospinal meningitis. 8. Name causes for infantile convulsions. 9. Give diagnosis and treatment of hereditary syphilis. 10. Give cause and treatment for intestinal worms.

MATERIA MEDICA AND THERAPEUTICS (HOMEOPATHIC)

1. Give the physiologic effects of belladonna, hyoscyamus and stramonium, and tell wherein they differ. 2. Give the tissues and organs of the body on which the following remedies especially act: (1) chelidonium; (2) croton tiglium; (3) sabina; (4) cannabis indica, and (5) esculus. 3. Describe the action of lycopodium on the digestive organs and on the urinary organs. 4. Give the aggravations of arsenicum, belladonna, pulsatilla, natrum muriaticum, nux vomica and podophyllum. 5. Describe the coughs of phosphorus and bryonia. 6. Differentiate between cinchona, arsenicum and natrum muriaticum in intermittent fever. 7. Give the chest symptoms of antimonium tart., the indications for aurum metallicum in syphilis, the gastric symptoms of antimonium crudum. 8. Mention four remedies especially useful in early morning diarrheas and give indications for each. 9. Differentiate between mercurius corrosivus and esculus in dysentery. 10. What remedies are especially useful for bad results from vaccination?

PRACTICE OF MEDICINE AND PEDIATRICS (HOMEOPATHIC)

1. Give symptoms and treatment of renal colic due to renal calculus. 2. Goiter: give varieties, symptoms, pathology and treatment. 3. Give pathology, diagnosis and treatment of diabetes mellitus. 4. Given a number of cases of acute desquamative nephritis among infants, what cause would you expect and how treat? 5. Epileptiform convulsions in a man of 68 years. Give probable cause and pathology. 6. Define and give etiology and treatment of hiccough. 7. Give symptoms and treatment of chronic valvular insufficiency with regurgitation. 8. Give pathology, symptoms and treatment of enterocolitis in children. 9. Give pathology, diagnosis and treatment of cerebrospinal meningitis. 10. Diagnose tetanus. Give treatment.

Book Notices

REPORT OF THE INTERNATIONAL PLAGUE CONFERENCE, Held at Mukden, 1911. Paper. Pp. 483, with illustrations. Manila: Bureau of Printing, 1912.

This report is in the form of a well-printed book of about 500 pages, covering the full transactions and includes all of the papers, and the discussions and other proceedings stenographically taken at that conference. Probably nowhere else has a more distinguished body of scientists gathered together to study an epidemic disease; and the findings as set forth in the papers and discussions of this report, though not conclusive, still have greatly cleared up our knowledge concerning plague.

The form of plague existing in Manchuria was the pneumonic form. The interim report of this conference, of which this is a final report, was discussed in the editorial columns of THE JOURNAL, July 29, 1911, p. 399, and the conclusions of the conference were briefly summarized. The report is edited by Dr. Richard P. Strong, who with Dr. Teague, both of Manila, constituted the delegation from the United States to the conference. A number of experiments, conducted by various members during the conference, and not concluded at that time, were completed by Drs. Strong and Teague, and their conclusions are also embodied in the report. There are a number of charts and colored plates and much tabulated matter.

MILK MODIFICATION CARD. A Rapid Calculation Device. By J. H. Young, M.D. Price, $0.50. Boston: F. H. Thomas, 691 Boylston Street, 1912.

This is an ingenious card designed to facilitate the modification of milk, which consists of a celluloid envelope labeled for the quantities of fat, proteid, sugar and whey to make the milk mixture. The envelope has a number of little windows cut in it, corresponding to the various quantities which it is desired to determine. Two cards designed to show the amounts for a 20-, 32-, 40 and 48-ounce mixture, respectively, are placed inside the envelope. The apparatus is employed as follows. If the desired percentage of proteid be brought to the corresponding window, one sees through the other windows the number of ounces of cream, skimmed milk and whey to be used and the percentage of fat, proteid and sugar obtained, together with the number of calories produced by each constituent. In a similar way the desired percentage of fat can be brought to the window and the amounts and percentage of the other ingredients will be designated at the other windows. The apparatus is evidently well suited to the routine modification of milk and intelligently used ought to be serviceable to the general practitioner, especially to the busy pediatrician.

INFANTILE PARALYSIS IN MASSACHUSETTS DURING 1910. Together with Reports of Special Investigations Made in 1911 Bearing on the Etiology of the Disease and the Method of Its Transmission. Paper. Reprinted from the Monthly Bulletins of the Massachusetts State Board of Health for 1911.

Massachusetts is one of the states in which infantile paralysis has been quite prevalent, and a thorough investigation of it has been conducted by the state board of health for the past four or five years. This pamphlet represents the results of an intensive study of the disease during the year 1910, with

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report of special investigations made in 1911, bearing on the etiology and method of transmission. It includes a historical account of the disease and studies of its various aspects by Lovett, Sheppard, Rosenau, Amoss, May, Hennelly, Brues, Hammond, Lucas, and the secretary of the State Board of Health, Mark W. Richardson. The disease has been studied and reported on in all its aspects, and the pamphlet includes a great many case reports from epidemics in different districts, together with maps, charts, tables, etc. The prevailing theories and experimental findings are discussed and an attempt is made to apply these findings to the disease as it occurred throughout the state. While it cannot be said that definite conclusions have been reached from these studies, yet the general knowledge of the disease has been distinctly furthered. The pamphlet is a valuable collection of information concerning infantile paralysis.

THEORIE UND PRAXIS DER INNEREN MEDIZIN. Von Dr. Erich Kindborg. Second Volume. Die Stoffwechselstörungen, Die Krankheiten des Bewegungs-apparates und der Verdauungsorgane. Cloth. Price, 10 marks. Pp. 634, with 74 illustrations. Berlin: S. Karger, 1912.

The subjects included in the second volume of Kindborg's work afford an excellent opportunity for the application of the distinguishing principle on which the book is founded, viz., the presentation to the student of enough of the fundamental sciences to enable him to understand their application to the pathology and treatment of the individual disease under discussion.

The volume includes disturbances of metabolism, diseases of the locomotive apparatus and disease of the digestive system. The physiology and chemistry of digestion and metabolism are first considered; directions are given for the quantitative determination of sugar and other processes of urinalysis concerned in diabetes. The section on diseases of the digestive system includes a chapter on the teeth and what is an unusual arrangement, one on diphtheria. At this place in connection with antitoxin the author takes occasion to explain Ehrlich's side-chain theory. In a similar way the subject of typhoid fever is discussed in connection with diseases of the small intestine. This arrangement seems to have a drawback, inasmuch as the septicemic character of typhoid is apt to be lost sight of. Dysentery is also included among diseases of the large intestine.

These various affections particularly those of the digestive organs give ample opportunity to review the salient facts of physiology and chemistry and to apply them to pathogenesis and diagnosis. The treatment of the individual subjects is satisfactory and the author is to be congratulated on his success in carrying out his plan.

AUTOBIOGRAPHY OF A BABY. Told to Thomas Lindsley Bradford, M.D. New Revised and Enlarged Edition. Cloth. Price, $0.50. Pp. 107. Philadelphia: David McKay, 604 South Washington Square, 1912.

In the form of a baby's biography is given excellent advice to mothers and nurses on infant management. A variety of formulas covering milk modification, barley water, foods, etc., are included in an appendix. The book is one to be commended to mothers.

MODERN METHODS OF NURSING. By Georgiana J. Sanders. Cloth. Price, $2.50 net. Pp. 881, with 228 illustrations. Philadelphia: W. B. Saunders Company, 1912.

This is one of the best books on nursing published in recent years. If the introduction could be published as a separate pamphlet it would be of great help to young women thinking of taking up nursing, as it discusses the various kinds of training-schools and considers in detail their advantages and disadvantages.

DIAGNOSE UND THERAPIE DER MAGEN- UND DARMKRANKHEITEN. ANHANG: Die Chemische und Mikroskopische Untersuchung des Mageninhaltes und der Faeces. Von Priv. Doz. Dr. Walter Zweig, Abteilungsvorstand am Kaiser-Franz-Josef-Ambulatorium in Wien. Second Edition. Paper. Price, 16 marks. Pp. 502. Berlin: Urban and Schwarzenberg, 1912.

This well-known work of Zweig appears in its second edition in a much enlarged form. It has been brought up to date by the inclusion of the most important therapeutic and diagnostic advances, which have been brought about through our constantly increasing knowledge of the physiology and pathology of digestion. The incorporation of a short, but adequate, section on the chemical and microscopic examination of the gastric and intestinal contents makes the work much more acceptable to the general worker. The book is to be recommended especially to the general practitioner as a thoroughly reliable guide.

Medicolegal

Constitutionality of Practice Act—Occupation Tax and Taxation of Itinerant Physicians

(State vs. Doran (S. Dak.), 134 N. W. R. 53)

The Supreme Court of South Dakota reverses the judgment against the defendant, who was convicted of practicing medicine as an itinerant physician without first having obtained a license from the State Board of Medical Examiners as required by section 19 of chapter 176 of the Laws of South Dakota of 1903, and it directs that the complaint be dismissed, because of the unconstitutionality of the exemption of certain physicians by section 22.

The enactment of laws regulating the practice of medicine the court says is clearly within the police power of the state, and is sustained by judicial decisions of the highest authority. It is well settled that the state may prescribe qualifications which persons must possess lawfully to practice medicine and surgery, and may require persons desiring to enter such practice to obtain a license or certificate of proficiency. The method or means by which these qualifications are to be evidenced is very largely, if not wholly, within the exercise of legislative discretion.

The legislature may permit those practicing in the state at the time the act is passed to continue without diploma or other evidence of competency on the theory that the fact that they have been engaged in the practice within the state is sufficient evidence of proficiency, and equivalent to an examination and license by the tribunal established by law for that purpose, and such a law will not be held unconstitutional as discriminating between persons or classes.

The legislature may also lay an occupation tax on physicians and surgeons, as on other professions and occupations.

Section 19, which provides that any physician attempting to practice as an itinerant physician shall, in addition to the ordinary physician's license required under the act, procure an itinerant's license from the state board of medical examiners, for which he is required to pay $500 a year, it is perfectly clear is not, and does not pretend to be, legislation involving the exercise of police power. It contains nothing requiring special fitness or qualifications for practicing medicine as an itinerant physician, nor does it pretend to be regulatory of such practice. It is plainly an occupation tax, and involves only the exercise of the taxing power, and it is subject to the provision of the state constitution that "all taxation shall be equal and uniform."

Licensed medical practitioners are divided by this act into two classes, the basis of the classification being the mode in which the business is carried on, namely, those who practice in the mode defined by the statute as itinerants, and those who follow other methods. That such a classification is neither arbitrary nor unreasonable, and is within the legislative discretion, the court has no doubt. The constitutional rule that taxes shall be equal and uniform does not deprive the legislature of the power of dividing the subjects of license or occupation taxation into classes, and of taxing some and omitting others, when the classification itself is proper. Substantial differences in the mode of carrying on a business or profession may be made the basis of classification. But the constitution does require that an occupation tax shall be equal and uniform as to all persons embraced within the same class.

Section 22 of the act under consideration undertakes to exempt certain classes of physicians from the operation of

the act, both as to the requirement of an examination and the payment of examination fees, and from payment of an itinerant's license tax. The exemption includes all "resident physicians and surgeons of this state regularly licensed and practicing in this state at the time of taking effect of this act." All others are required to pay the itinerant's tax. It may be observed that all resident licensed physicians, although not practicing as itinerants when the act became operative, may take up that mode of practice at any time, and still be exempt from the tax. If this section be viewed as an attempt to exempt a portion of a class conducting a professional practice as itinerant physicians in identically the same manner, it requires no argument to demonstrate its unconstitutionality. The exemption of resident licensed practitioners from the examination fee and other requirements as to qualifications is clearly valid as a proper exercise of legislative discretion within the police power. But residence within, or residence outside of the state, cannot be made the basis of discrimination in the taxation of persons engaged in the same occupation or profession. And if the section be regarded as an attempted classification of itinerant practitioners, the classification rests solely on the fact of residence and practice in the state prior to the date when the act became operative, which discriminates against citizens of other states, and is in violation of article 14 of the federal constitution.

The exemption of every resident licensed practicing physician within the state at the date of the act from payment of the itinerant license tax, while requiring all others in the same class to pay the tax, is such an integral part of the act establishing the system of occupation taxation on itinerant medical practitioners as to render the act, so far as it relates to itinerant physicians, wholly void. It is also clear that, if section 22 of the act exempting resident practicing physicians from payment of the tax be stricken out as unconstitutional, the remaining provisions of the act relating to intinerant physicians are incapable of being executed according to the legislative intent, and are likewise rendered inoperative and void. The remaining portions of the act, however, relating to examination and examination fees and other matters incident thereto, in themselves constitute a complete law capable of enforcement, and such as the legislature, it may be presumed, would have passed without the provisions relating to the occupation license tax. The act with the unconstitutional provisions eliminated is therefore valid and enforceable as an exercise of the police power of the state.

Liability of Railroad for Malpractice—Evidence of Incompetence of Surgeon

(Atlantic Coast Line R. R. Co. vs. Whitney (Fla.), 56 So. R. 937)

The Supreme Court of Florida, Division A, reverses for error in the admission of evidence on the competence of a surgeon a judgment against the railroad company for $20,000 damages for the plaintiff Whitney for the loss of his right leg. The court says that the cause of action was twofold: First, for the original injury, and then for the subsequent alleged malpractice of the surgeon for the railroad company. To make out the second cause of action it was charged that the surgeon was unskilful and incompetent, and that the company knew it.

The plaintiff exhibited to the jury several witnesses, too much in the nature of exhibits, who testified, over proper objections, that they had been injured by this railroad and subsequently had received maltreatment at the hands of this surgeon, and one surgeon testified that a certain operation by the railroad surgeon was not successful, but could not say from an examination of the wound whether the treatment was proper or not; while another surgeon testified to finding a piece of gauze in a wound that should have been removed. It further appeared that the chief surgeon of the railroad hospital knew of a treatment by this surgeon which it was claimed was improper. But it also appeared that the surgeon complained of was a graduate of reputable medical schools, and there was no evidence as to his general reputation as to skill and competence being bad, nor that the president or other executive head of the railroad company had actual knowledge that he was unskilful or incompetent in his profession.

This case demonstrated to the mind of the court the wisdom of adhering to the general reputation, rather than isolated instances, to bring home to the principal guilty knowledge of incompetence. Every witness exhibiting his injuries before the jury tended to inject new issues which the company could not in reason be prepared to meet. It must provide competent engineers, not merely exercise some care in selecting them, and a different rule as to those servants engaged in operating the trains, in performing its duty as a common carrier, might well obtain: but the company was not responsible for the negligent work of its surgeon, if not negligent in selecting or retaining him, and knowledge of his failings must be brought home to it. His general reputation might be so bad that the law would impute knowledge; but nothing short of that would make it liable. This rule forbidding particular instances is in direct accord with previous rulings of this court on somewhat similar conditions, and is the ruling of the only direct adjudication to which this court's attention has been directed. In Lacy vs. Kossuth County, 106, Iowa, 16, it is held that evidence of particular acts is not admissible to prove the competency of a physician. His general reputation for skill is alone relevant, which can be proved only by persons knowing such reputation in the community where he is engaged in practice. Wherefore it was error in this case to permit to be shown specific acts of unskilfulness not brought home to the knowledge of the company, such as those above stated.

Compensation for Expert Services in Criminal Cases

(People ex rel. Manley vs. Board of Supervisors of Chenango County (N. Y.), 132 N. Y. S. 868)

The Third Appellate Division of the Supreme Court of New York holds that the action of the board in allowing the relator but $5 a day for expert services must be annulled, with $25 costs and disbursements, and the matter remitted for further audit. The court says that the relator was a physician and surgeon whom the district attorney consulted with and employed as an expert witness in a murder case. No specific compensation was agreed on. The claim made out against the county was for $10 a day for three days' services, the district attorney indorsing thereon: "Dr. Manley attended the case as charged, and his bill would seem proper." After consultation with the district attorney concerning it, the board allowed the bill at but $15.

The district attorney had the power, the court goes on to say, to obligate his county to pay a reasonable sum for the services of an expert witness in the criminal trial about to be had. While his agreement was subject to review and audit as to amount by the board of supervisors, which would not be bound by any specific sum which he had agreed to pay, the county was compelled to recognize his agreement to pay the relator for his services as an expert witness, and bound to audit a reasonable sum therefor. The only proof appearing in the record was that $10 a day for such services was the minimum charge prevailing at the time in the county of Chenango, and the record disclosed that that amount was allowed to other witnesses in the same case. The board allowed only $5 a day, which under the facts appearing was wholly unreasonable. It was not seriously contended that the relator was not employed as an expert witness. If he was not employed as an expert, he was entitled to nothing aside from his ordinary fees. Having been employed as an expert, he should have been allowed at least the minimum rate therefor. The fact that other bills were allowed to him could not affect the bill under consideration. Those audits must be presumed to have related to the precise services for which the bills were presented, and it was to be assumed that the board of supervisors properly audited them.

While the amounts demanded by physicians for expert services in criminal matters are often the subject of just criticism, they are entitled to fair and reasonable compensation, and justice would often miscarry if juries did not have the benefit of their expert testimony.

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Journal of Kansas Medical Society, Kansas City

May, XII, No. 5, pp. 167-208

1 Cholecystitis With and Without Stones. T. Jager, Wichita.
2 Renal Calculus. M. Hagan, Wichita.
3 "Appendix, Gall-Bladder & Company." What Is Their Relation? H. Wilkinson, Kansas City.
4 *Patent Medicines or Nostrums. L. E. Sayre, Kansas City.
5 Acute Osteomyelitis. J. E. Oldham, Wichita.

4. Patent Medicines or Nostrums.—It is a well-known psychologic phenomenon among medical students, says Sayre, that during the course of their medical study of diseases and their symptoms they are usually affected with the belief that they are themselves afflicted with the particular disease under consideration. The same principle of psychologic influence is illustrated in the reading of the newspaper advertisements of patent medicines. The adroit and skilful manipulator of words in ordinary advertising practice can make a man believe that he has every disease there presented, and, in addition, that the nostrum advertiser can supply the exact specific for these diseases.

Since the enactment of the Food and Drugs Law and the administration of this law in the various states, the patent medicine and nostrum business has become a subject of scrutiny on the part of scientific men, and those who are interested in public welfare. Those who are studying the question carefully are surprised at the extravagant claims made on the labels and wrappers of these nostrums and the almost total lack of merit of the preparations thus advertised. Such medicinal preparations have been exploited in Kansas. One of these has been advertised to cure about thirty different diseases, from consumption to Bright's disease, by dropping the medicinal liquid into the eye. This liquid when analyzed at the University Drug Laboratory was found to consist of a watery solution of salt and sugar. The foxy proprietor of this preparation knew that the dear public would, by suggestion, be influenced to have the various diseases enumerated and be led to believe the brazen statements made; that this alleged remedy (salt and sugar), was the one reliable remedy for the long list of diseases enumerated.

Another one of the so-called patent medicines, calculated to allure public patronage is known as Fruitola and Traza. This compound is alleged to be a system cleanser, to remove gallstones and to positively cure all stomach trouble. On analysis, this alleged wonderful remedy is found to contain ordinary olive oil as the principal medicinal substance. It is unnecessary to enumerate the results of analyses of scores of these nostrums in the drug laboratory of the University of Kansas. Suffice to say they are composed of ordinary medicinal agents, for which absurdly extravagant claims are made. The history of the patent medicine and nostrum business will show that originally they claimed to be inventions or discoveries in therapeutics. In process of time these so-called discoveries were found to be compounds of well known simple remedies. One who can put together rhubarb and senna or calomel and jalap is certainly no discoverer, but merely a mixer of well-known remedial agents. It is true, that if these were mixed without ordinary professional skill they might be a mere jumble of things, but the mixing of them with proper skill cannot claim for them an invention worthy of protection as a patent.

What shall we have to take the place of patent medicines? asks Sayre. For minor ailments, every home should be provided with well known household remedies. With these it should be the duty of the family provider to become not only well acquainted, but, with some careful attention, to become intelligent in their use. This should be the duty of the mother, who is naturally, from her position, the nurse of the family. These household remedies should contain ingredients about which there should be no suggestion of secrecy nor be even seemingly protected by so-called misnamed patents. They should be composed of well recognized medicinal agents, about which the physician or pharmacist should be able and willing to furnish reliable and trustworthy information without remuneration. This information should be given freely, as it is common property, contributed by pharmacists and physicians and published in standard medical works. If physicians, pharmacists and the public would combine and cooperate with each other along indicated lines, it would not be long before the days of the nostrum fakers would be numbered.

New York Medical Journal

May 25, XCV, No. 21, pp. 1073-1124

6 Hysterical Dreamy States, Their Psychologic Mechanism. A. A. Brill, New York.
7 Training of the Urologist. H. Cabot, Boston.
8 Research in Psychiatry. B. Holmes, Chicago.
9 Application of Psycho-Analysis to Insanity. C. M. Campbell, White Plains, N. Y.
10 Diagnosis and Treatment in Surgery of Stomach. G. Woolsey, New York.
11 Organacidia Gastrica, Diagnosticated by Inspection. M. I. Knapp, New York.
12 Old Age in Its Medicolegal Relations. I. L. Nascher, New York.
13 Results Obtained from Addition of Lactalbumin to Modified Cow's Milk in Feeding of Infants. E. M. Sill, New York.
14 Burn of Urethra with Lunar Caustic, Followed by Complete Cast of Urethra. V. C. Pedersen, New York.

Archives of Internal Medicine, Chicago

May 15, IX, No. 5, pp. 525-640

15 *Diagnosis of Complete Absence of Pancreas Secretion from Intestine with Results of Digestion and Absorption Experiments. W. Tileston, New Haven, Conn.
16 *Value of Absorption Methods in Wassermann Test. C. H. Bailey, New York.
17 *Production of Experimental Chronic Nephritis in Animals by Administration of Uranium Nitrate. E. C. Dickson, San Francisco.
18 *Experimental Study of Changes in Blood Following Splenectomy. J. H. Musser, Philadelphia.
19 *Frequency of Experimental Glycosuria Following Injections of Extracts of Hypophysis. J. L. Miller and D. Lewis, Chicago.
20 *Occurrence of Native Antisheep Amboceptor in Human Serum and Its Importance in Performance of Wassermann Reaction. R. Dexter and C. L. Cummer, Cleveland.
21 *Leukocytes in Pulmonary Tuberculosis and Pneumonia. J. A. Miller and M. A. Reed, New York.

15. Absence of Pancreatic Secretion from Intestine.—The complete absence of pancreatic juice was found by Tileston to interfere greatly with the absorption of fat and of nitrogen. The fat-splitting in this condition is usually normal, sometimes decreased. The saponification is almost always much diminished, and the fatty acids always exceed the soaps. Exclusion of both the bile and pancreatic juice causes a considerably greater loss of fat, and a somewhat larger nitrogen loss than where the pancreatic juice alone is excluded. In the absence of icterus, a fat loss of 40 per cent. or over, and a nitrogen loss of over 30 per cent., according to Tileston's findings, point almost with certainty to pancreatic disease, provided the following conditions are excluded: diarrheal diseases, amyloid disease and tuberculosis of the intestine, tuberculosis of the peritoneum and mesenteric lymph-nodes. If icterus is present, a fat loss of more than 50 per cent. favors pancreatic disease, and the greater the loss, the stronger the probability. The value of the nitrogen determination is but slightly impaired by the presence of jaundice, for in simple icterus the nitrogen loss is but slightly above the normal. The amount of the fat-splitting has usually but little diagnostic importance; a very great reduction, however, is suggestive of pancreatic disease. An excess of soaps over fatty acids renders the diagnosis of complete absence of the pancreatic juice extremely improbable. By the administration of raw pancreas or of pancreatic preparations in pancreatic disease the absorption of fat and nitrogen, as a rule, can be greatly improved. In a case in which both the gastric and the pancreatic secretions were deficient, the absorption of nitrogen was considerably increased by the administration of hydrochloric acid and pepsin, though not to the same extent as by pancreatic preparations.

16. Absorption Methods in Wassermann Test.—From the observation of cases and experiments Bailey concludes that it is possible for antisheep amboceptor in human serum to affect the Wassermann reaction, but that when an antigen of high

titer is used this is possible only with serums of very low antibody content and several units of antisheep amboceptor. As these two conditions, in his experience, occur but rarely in practical work, he feels that, when a strong antigen is used, the importance of antisheep amboceptor in human serum as a cause of negative reactions in syphilitic cases is not great. As a routine procedure, the absorption of amboceptor is unnecessary. Its removal is, however, advisable from serums which give a negative or doubtful reaction, and which contain a large amount of antisheep amboceptor. This is easily accomplished by digestion with sheep cells. It is immaterial whether this is done at 0 C., 37 C., or at room temperature.

17. **Production of Experimental Chronic Nephritis.**—By the administration of uranium nitrate Dickson was able to produce a chronic diffuse nephritis in guinea-pigs, rabbits and dogs. The histologic picture of the lesions is characteristic, and is analogous to, but not identical with, that found in chronic diffuse nephritis in man. The chronic lesions, even in the most severe cases, are not associated with demonstrable arterial lesions, although the mode of development suggests that there must be some functional vascular damage. After prolonged administration in guinea-pigs a terminal attack of acute nephritis is frequently accompanied by more or less marked anasarca. Associated with the more severe kidney lesions there is frequently a more or less marked hypertrophy of the left ventricle of the heart.

18. **Blood-Changes Following Splenectomy.**—Musser found that splenectomy causes in the dog secondary anemia, lasting about two and a half months: a postoperative leukocytosis, most marked twenty-four hours after operation and lasting a variable time, longer indeed than these counts have been carried—138 days; a total absence of eosinophils from about the third to the eleventh week followed by an eosinophilia of a rather pronounced degree; a decrease and later an increase in the number of large mononuclears and transitional forms, the lymphocytes and polynuclears being proportionally increased and later decreased. On account of the secondary anemia, pronounced at times, and seen both in man and animals, the operation of splenectomy must be considered more seriously than it has been heretofore; at least, measures for the conservation of the general health of the patient and the regeneration of the blood must be kept in mind.

19. **Frequency of Experimental Glycosuria.**—Miller and Lewis found that intravenous or intraperitoneal injections of saline extracts of either the anterior or posterior lobe of the hypophysis will occasionally produce a transitory glycosuria in dogs. They consider it as doubtful whether or not this is due to the specific action of the extract on sugar metabolism. The tremor, marked respiratory symptoms, and intestinal disturbance following the injection are sufficient to account for it.

20. **Native Antisheep Amboceptor in Human Serum.**—Of the twenty-eight positive reactions obtained by Dexter and Cummer which were altered by the addition of artificial amboceptor, eight were changed to frankly negative reactions and eight became plus-minus reactions, which could not be considered positive. Thus it is interesting to note that out of the seventy-seven serums observed, there were sixteen positive reactions (21.8 per cent.) which became either entirely negative or ambiguous and for practical purposes could only be considered negative. The authors believe that it seems justifiable to conclude that while the presence of a native antisheep amboceptor in human serum is by no means constant, it is essential to take note of its presence or absence in performing the complement fixation test for syphilis by the Wassermann method, and that if this precaution be not taken, a certain and by no means very small percentage of positive reactions will be recorded as negative. By following this simple method of controlling the reaction, this error will be obviated to a large degree.

21. **Leukocytes in Pulmonary Tuberculosis and Pneumonia.**—The study of the leukocytes is believed by Miller and Reed to give valuable information in the prognosis and clinical course of pulmonary tuberculosis. In diagnosis of incipient cases it is of no assistance but in differential diagnosis of whether more acute pulmonary lesions are due to tuberculosis or some other infection it is sometimes helpful. Arneth's differential neutrophil count is important in tuberculosis. In general, the following changes in the leukocytes occur in cases of pulmonary tuberculosis which are progressively doing badly or are in an exacerbation of the disease: (a) a leukocytosis; (b) an increased percentage of neutrophils; (c) a diminished percentage of small lymphocytes; (d) a diminished percentage of eosinophils; (e) a marked shifting to the left of Arneth's blood-picture. Conversely, changes in the opposite direction in any of the above factors are favorable.

With regard to pneumonia, leukocytosis occurs as frequently in fatal cases as in those of recovery. This leukocytosis is due to the increased number of neutrophils. When this increase of neutrophils is excessive a very severe infection is indicated. Arneth's differential neutrophil count shows a constant shifting to the left in pneumonia, but it bears no relationship to the clinical course of the disease.

Medical Record, New York

May 25, LXXXI, No. 21, pp. 973-1018

22 Luetin Test for Syphilis. R. B. H. Gradwohl, St. Louis.
23 Gonorrheal Arthritis: Methods of Diagnosis and Treatment. G. K. Swinburne, New York.
24 Case of Typhoid with Unusually Long Duration of Seventy-Eight Days of Primary Attack. M. Manges, New York.
25 Auto-Intoxication Direct Result of Mechanical Defects Which Produce Stasis in Colon. C. E. Coon, Syracuse, N. Y.
26 Sitophobia: Digestive Phantasm. G. M. Niles, Atlanta, Ga.
27 Surgical Treatment of Exophthalmic Goiter. M. B. Tinker, Ithaca, N. Y.
28 Diverticulum of Cecum. J. F. Baldwin, Columbus, Ohio.
29 Sea Sickness and the Pneumogastric. A. Maverick, San Antonio, Texas.

Boston Medical and Surgical Journal

May 23, CLXVI, No. 21, pp. 759-786

30 Causes for Failures in Treatment of Chronic Joint Diseases, and Some Suggestions How Greater Successes Can Be Attained. H. W. Marshall, Boston.
31 *Eradication of Typhoid. A. J. McLaughlin, Washington, D. C.
32 *Control of Typhoid. M. W. Richardson, Boston.
33 Importance of Milk Stations in Reducing City Infant Mortality. A. E. Howard, Boston.
34 *Hypodermic Injections of Iron and Arsenic in Secondary Anemia. J. H. Musser, Philadelphia.
35 Treatment of Fracture of Clavicle. F. E. Peckham, Providence, R. I.
36 *Prevention of Occupational Diseases. H. Linenthal, Boston.

31. **Eradication of Typhoid.**—Typhoid is considered by Laughlin as being in the same category as Asiatic cholera. After water and milk supplies have been made safe, the fight against typhoid, to be successful, must be made with the same vigor and along the same lines as a successful campaign against cholera. The difficulty of getting rid of the last vestiges of infection when the rate is below two deaths per 100,000 is conceded, but with a rate above ten, Laughlin says there is little excuse for failure to wage an active eradication campaign against typhoid as a dangerous contagious disease. With a wider use of the laboratory, he says that a greater control is possible over those who handle food and drink in public places. These are matters of public hygiene, and no matter how perfect official control over water and milk supplies may be, the citizen is still exposed to infection from individuals who infect his food and drink in restaurants and hotels, on steamboats or trains. Some official control is possible under the license system of those who handle food and drink in public places, but the greatest hope for reducing the menace from this source lies in education of the individual in personal hygiene.

32. **Control of Typhoid.**—The education of the individual citizen, Richardson says, is, after all, in this as in so many other situations, the main hope of salvation. What can the State Board of Health do in this regard? The annual reports of the board reaches a very small and generally a professional circle of readers. The *Monthly Bulletin* offers an excellent medium for the diffusion of health knowledge, but here again the circulation is small; but it is hoped to increase the influence of this publication by sending advance press sheets each month to about one hundred daily and weekly newspapers of the state. Public health articles are readily reprinted by such journals. Indirectly, something has been accomplished through relation to the dairymen of the state, who are being advised constantly as to the conditions under which they produce milk,

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the proper handling and placing of manure, the location and care of privies and the disposition of refuse in general. These facts are being hammered into the farmer constantly and are bound in the end to produce results.

Nearly all the fly agitation has had for its object the elimination of the ordinary house fly. Richardson urges, however, that in the future we must pay more attention to the various biting flies, which are much more numerous than one suspects, until he begins to look for them. We have only just begun to realize that our domestic animals, although apparently in perfect health, may be infested with a considerable variety of parasites, and what the relation of these parasites may be to human disease is largely unknown. Some of these are known to be transferred to other animals and to human beings by biting insects, and further study will, doubtless, bring out increased evidence as to such an interrelation between human and animal affections.

34. **Hypodermic Injections of Iron and Arsenic in Secondary Anemia.**—Musser has had the opportunity to observe the general condition and to make repeated blood counts on a series of fourteen patients who received, hypodermically, injections of iron and arsenic. The difficulty and expense of securing foreign preparations led to the use of a solution of ferric citrate prepared locally. This was used in various doses, but on the whole the results were not such as would indicate a continuation of the treatment. The ferric citrate in doses sufficiently large to give good results was found to be so irritating, and the injection so painful, that the patients for the most part rebelled against the treatment. Also in a few cases there were attacks of vertigo, fainting and in some cases vomiting after the injection. Then the present formula was secured and so far has given most satisfactory results.

The iron is used in conjunction with arsenic and sodium glycerophosphate. Of the iron and arsenic, of each .06 gm., and of the sodium glycerophosphate, .10 gm., are dissolved in 1 c.c. of distilled water. This makes a slightly alkaline, reddish tinged solution, clear, without sediment. It is placed in small glass ampules, sterilized and when sealed is ready for instant use. Each ampule contains a sufficient quantity for one dose. The few minutes necessary to sterilize the syringe and needle are all the time required to give the injection. It may be given in any muscle, but in the treatment of ambulatory cases the most satisfactory site of injection is directly into the muscles of the thigh or into the deltoid muscle. The solution is so free from irritating qualities that it has not been found necessary to give the injections deep into the gluteal or lumbar muscles.

The treatments, as a rule, were given twice a week, though in some cases as often as daily for a short time. In several cases the injections were only given once a week. With the iron and arsenic, treatment was usually given for the local condition causing the anemia. In some of the cases treatment of the local condition had been carried on for some time without any definite improvement. On the addition of the iron and arsenic, the results were usually most pronounced. The increase of hemoglobin and erythrocytes brought with it freedom from the troublesome symptoms. The amelioration of the symptoms and improvement in the primary trouble usually resulted in such improvement that in most cases the treatment could not be carried as long as was desirable. In most of the cases the treatment was simply the correction of dietetic and hygienic faults.

In the fourteen cases treated in this manner, only one failed to respond promptly. This patient, a young married woman, was found later to be pregnant and the treatment was discontinued.

36. **Prevention of Occupational Diseases.**—For the prevention of the ill-effects on health from industrial processes or conditions the author says the following measures should be adopted: 1. To collect complete and accurate data about industrial processes and about conditions under which the various industries are carried on. 2. To obtain more accurate and detailed information relative to occupation on morbidity and mortality records. 3. To instruct the medical student in this important field of preventive medicine by a course of lectures on the more important industrial processes and the diseases to which they give rise. 4. To place the specific industrial diseases on the list of diseases notifiable to the central health authority. 5. To examine periodically all workers in certain industries, these industries to be named by the central health authority. 6. To exclude minors and women from certain industries which are designated by the central health authority as injurious to health. 7. To have adequate laws regulating sanitary conditions and protective devices in industrial establishments, and to have such laws intelligently enforced. 8. To have the central health authority issue regulations for certain dangerous trades with instructions to employers and employees how to guard themselves against the ill-effects of their work and to have such instructions posted in the workrooms. 9. To carry on an extensive educational campaign among both employers and employees as to the value of protective measures and good sanitary conditions.

Washington Medical Annals, Washington, D. C.

May, XI, No. 2, pp. 85-133

37 Tonsillectomy. Consideration of Its Complications. C. W. Richardson, Washington, D. C.
38 Lesions of Nervous System in Pernicious Malaria and Neurologic Sequelæ of Malarial Cachexia. S. R. Lafora, Washington, D. C.
39 Epidemic Cholera. Specimens in Army Medical Museum. D. S. Lamb, Washington, D. C.
40 Sarcoma of Left Frontal Lobe Without Symptoms Until Shortly Before Death. B. M. Randolph, Washington, D. C.
41 Burns. W. A. Jack, Washington, D. C.
42 Specimens in Army Medical Museum from Prehistoric Peoples. D. S. Lamb, Washington, D. C.
43 Unusual Case of Tabes with Toxic Complications in Etiology. T. A. Williams, Washington, D. C.

Therapeutic Gazette, Detroit

May 15, XXVIII, No. 5, pp. 305-380

44 Treatment of Various Forms of Ocular Syphilis with Salvarsan. G. E. deSchweinitz, Philadelphia.
45 *Action of Different Agents on Secretion of Milk. I. Ott and J. C. Scott, Philadelphia.
46 Dangerously Poisonous Snakes of United States. H. Tucker, Philadelphia.
47 Scarlet Red for Granulation. S. B. Kositchek, Chicago.

45. **Influencing Milk Secretion.**—The authors' experiments were fifty in number, and were made on lactating goats. They made experiments with boiled thymus and boiled pineal body. They found both increased the secretion of milk. They also found that boiling the mammary gland did not prevent its galactagogue action, which has been shown by Mackenzie to increase the flow of milk. They then tried the effect of a dose of atropin, 1/50 of a grain by the vein, before the injection of the corpus luteum, infundibulin, and pineal gland, but they still increased the milk secretion, although not to as great an extent as before the atropinization. In the lactating goat they tried several successive injections by the vein of 0.5 c.c. of infundibulin. The normal milk secretion was four drops every five minutes. The first increase was 101 drops, the second thirty-two drops, the third twelve drops, the fourth twenty drops, the fifth ten drops and the sixth seven drops. The mammary gland is very sensitive to infundibulin; even 1/1,000 of a drop increased the milk secretion a drop, while 1/100 of a drop increased it five drops.

They found pilocarpin, 1/20 grain by the vein, to increase the milk secretion to a marked degree. If, however, 1/50 grain of atropin was given just previous to the injection, then the pilocarpin was without effect. If they waited forty-eight hours after the venous dose of atropin (1/50 gr.) and then injected 1/3 grain of pilocarpin intravenously, then the flow of milk increased to a small extent. Digitalin increased the secretion of milk. Caffein citrate, eserin, nicotin and muscarin had no effect in augmenting the milk secretion. Atropin arrested the milk secretion. Antipyrin reduced the flow one-half. They also studied the effect of proto-albumose and deutero-albumose. They caused a considerable increase in the secretion of milk. Peptone increased the secretion, but not so much as the albumoses. Glucose (gr. 20) caused a marked increase. Sodium chlorid increased it to a marked degree. Potassium chlorid also increased it, while calcium chlorid only slightly augmented it.

Kentucky Medical Journal, Bowling Green

May 1, X, No. 9, pp. 369-424

48 Pellagra. M. W. Steele, Corbin.
49 Idem. S. R. Snyder, Jellico, Tenn.
50 Serum and Vaccine Therapy. O. P. Chapman, Port Royal.
51 Idem. S. D. Taylor, Beaver Dam.
52 Early Diagnosis of Tuberculosis. J. O. McKenney, Taylor Mines.
53 Idem. W. M. Hyatt, Springfield.
54 Idem. E. Morris, Sulphur.
55 Tubercular Pleurisy. A. D. Willmoth, Louisville.
56 Influenza or La Grippe. T. H. Hardesty, Paynesville.
57 Lobar Pneumonia. C. T. Riggs, Upton.
58 Skin Tuberculosis. D. C. Dugan, Three Springs.
59 Chyluria. F. Dunlap, Danville.
60 Diagnosis of Poliomyelitis with Misleading Symptoms. T. A. Williams, Washington, D. C.
61 Cesarean Section; First in America. E. S. McKee, Cincinnati.
62 Relation of Renal Activity to Surgical Operation. E. O. Smith, Cincinnati.
63 Cyst of Mesentery. A. H. Barkley, Lexington.
64 Deformities of Children. W. A. McKenney, Falmouth.
65 Fibro-Adenoma. Report of Case. C. R. Garr, Flemingsburg.
66 How Do We and How Should We Treat a Brother Physician? R. T. Hocker, Arlington.
67 Modern Technic of Obstetric Case, Including Use of Forceps. C. B. Van Arsdell, Harrodsburg.
68 Similar Cases of Extreme Ages. J. Y. Welborn, Evansville, Ind.
69 Atypical Case of Peritonitis with Obscure Origin. W. S. Gabhart, Mackville.
70 Case Report of Quadruplets. C. T. Ricketts, Bright Shade.

Pennsylvania Medical Journal, Athens

May, XV, No. 8, pp. 597-678

71 *Surgery of Kidney. W. W. Babcock, Philadelphia.
72 *Traumatic Surgery of Hand and Foot. J. Jefferson, Johnstown.
73 *Secondary Repair of Perineum by Emmett Method. H. D. Beyea, Philadelphia.
74 *Herpes Zoster; Report of 286 Cases. F. C. Knowles, Philadelphia.
75 Mucomembranous Colitis. C. C. Mechling, Pittsburgh.
76 Adenoids; Their Effects on General System. J. J. King, New York.
77 Delivery and Treatment of Obstetric Patient. C. C. Turner, Wilkes-Barre.
78 Reason for Medical Organization and Benefits of Membership in County Medical Society. V. M. Reichard, Fairplay, Md.
79 County Society Bulletin; Its Benefits and Some of Work It Should Cover. J. B. Carrell, Hatboro.

71. **Kidney Surgery.**—As indicating renal tolerance of surgical intervention, Babcock cites seven cases, in each of which five or more operations were performed on the kidneys. Case 1. Recurrent nephrolithiasis. Six nephrotomies or nephrolithotomies and a nephrectomy with recovery. Case 2. Recurrent nephrolithiasis. Seven operations on the kidneys including nephrectomy. Recovery. Marriage and pregnancies. Case 3 Recurrent nephro- or ureterolithiasis and pyelitis. Six nephrolithotomies or nephrotomies with recovery. Case 4. High-grade parenchymatous nephritis with uremic attacks progressing despite treatment. Bilateral decapsulation, marked improvement, enabling the patient to resume her work. Return of the symptoms nine months later, with progressive loss of sight, and death. Case 5. Chronic high-grade parenchymatous nephritis with many uremic convulsions. Decapsulation of one kidney, followed by improvement for nearly two years, and of second kidney with improvement for two additional years. Recurrence of symptoms, and death. Case 6. Acute parenchymatous nephritis with marked anasarca. Transient improvement after bilateral decapsulation. Case 7. High-grade acute parenchymatous nephritis with marked anasarca. Uninfluenced by bilateral decapsulation.

72 and 73. Abstracted in THE JOURNAL, Nov. 4, 1911, p. 1558.

74. **Herpes Zoster.**—Zoster occurred 286 times in 21,337 cases of skin disease studied by Knowles. A great majority of the cases developed in the male sex, 205 out of 286 cases. But three instances were noted of the appearance of the disease under the age of one year; two in males of four and ten months and one in a female of six months. More cases occurred in the male sex between the ages of six and thirty years than in all of the other periods put together; 177 out of 208 cases. More were noted between the ages of twenty and thirty years, fifty-two cases, than for any like period. In the female sex, the greatest number, nineteen cases, were observed between the ages of ten and twenty years and the next, seventeen, between six and ten years. Twelve cases were seen in the negro race. Nationality and occupation did not help in the etiology. The left side of the body was attacked in 125 of the cases and the right in 148.

The location was unspecified in thirteen. The chest and back showed the greatest liability to attack. Ulceration, pustulation, abscess formation and a hemorrhagic or gangrenous condition of the vesicles were noted in a few instances. Pain was markedly present in twenty-five of the cases. It was comparatively slight in early life. In a few instances it preceded the outbreaks by a few days or some hours. In a few cases itching, pain, and burning persisted for some weeks after the attack. A markedly hyperesthetic condition of the skin, at the site of the original zoster, persisted for some months in three of the cases. The zoster was associated with other eruptions of the skin in thirty-two of the cases. Besides the usual location of the groups of herpes a few instances of lesions unusually located were noted, such as on the hands, the palms, the fingers, the soles of the feet, the scrotum and the penis. The mucous membranes were attacked in four cases, the lips, the cheeks, the tongue, the palate, the tonsil, the bulbar conjunctiva and cornea. Traumatism was apparently the cause in one case and the administration of arsenic in another. None of the cases of the author were of the bilateral or general distribution. More cases occurred in August than in any other month, thirty-four, while but thirteen appeared in December.

Journal of Indiana State Medical Association, Fort Wayne

May 15, V, No. 5, pp. 193-246

80 Gall-Bladder Infections and Gall-Stones, from Study of One Hundred Cases. M. A. Austin, Anderson.
81 Early Diagnosis of Pulmonary Tuberculosis. W. A. Gekler, Rockville.
82 *Diagnosis of Syphilis. W. P. Garshwiler, Indianapolis.
83 *Sociologic Aspect of Syphilis. C. E. Barnett, Fort Wayne.
84 *Treatment of Syphilis. D. C. Ridenour, Peru.
85 Value of Medical Society. G. F. Keiper, La Fayette.

82, 83 and 84. Abstracted in THE JOURNAL, Oct. 21, 1911, p. 1390.

Delaware State Medical Journal, Wilmington

May, III, No. 6, pp. 1-27

86 Two Hundred and Fifty Consecutive Operations. W. M. Priest, Wilmington.

Old Dominion Journal of Medicine and Surgery, Richmond, Va.

May, XIV, No. 5, pp. 285-344

87 Preventive Surgery. G. P. LaRoque, Richmond.

Journal of Ophthalmology and Oto-Laryngology, Chicago

May, VI, No. 5, pp. 140-174

88 Infectious Suppurative Keratitis. E. La Mothe, Chicago.
89 Nervous Vestibularis. W. G. Reeder, Chicago.

American Journal of Urology, New York

May, VIII, No. 5, pp. 229-286

90 Hematuria of Nephritis and Renal Papillitis from Surgical Standpoint. B. S. Barringer, New York.
91 Profuse Unilateral Renal Hemorrhage. Nephrectomy. Pathologic Report. H. A. Fowler, Washington, D. C.
92 Prophylaxis and Treatment of Postoperative Anuria. E. O. Smith, Cincinnati.
93 Fragment of Glass Irrigating Nozzle Removed from Bladder Without Open Operation. V. C. Pedersen, New York.
94 Burn of Urethra with Lunar Caustic Followed by Complete Cast of Urethra. V. C. Pedersen, New York.
95 Elephantiasis Cutis Penis. M. L. Heidingsfeld, Cincinnati.

Journal of Medical Association of Georgia, Augusta

May, II, No. 1, pp. 1-53

96 Powers of State Board of Health. S. C. Benedict, Athens.
97 Examination of County School Children. A. G. Fort, Atlanta.
98 Medical Milk Commission and Its Relation to Public Health. C. A. Rhodes, Atlanta.
99 Possibilities of Laboratory and Bacteriologic Work in Medium and Small-Sized Towns. W. W. Brown, Athens.
100 Unusual Cases of Nystagmus. A. W. Stirling, Atlanta.
101 Operative Treatment of Recent Fractures. F. K. Boland, Atlanta.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Practitioner, London

May, LXXXVIII, No. 5, pp. 625-760

1 *"Floating" or Movable Kidney Considered from Practitioner's Standpoint. Sir M. Abbot-Anderson.
2 What Adenoids Really Mean to Children. M. Yearsley.
3 *Treatment of Tuberculous Glands of Neck in Children. W. G. Sutcliffe.
4 Epidemic Gastro-Enteritis. S. Sheil.

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5 *Anemia Associated with Rickets and Gastro-Intestinal Disturbances, Including Splenic Anemia in Children. H. T. Ashby.
6 Rôle of Eye-Strain in General Practice. A. S. Cobbledick.
7 Practical Points in Diagnosis of Exanthemata and Allied Diseases. M. Young.
8 *Treatment of Various Types and Stages of Eczema. G. N. Meachen.
9 Diagnosis in Diseases of Joints. S. Boyd.
10 Appendicular Abscess in Pouch of Douglas. V. St. John.
11 Thoracoplasty for Chronic Empyema. J. R. Kerr.

1. "Floating" or Movable Kidney.—In Abbot-Anderson's experience the results of operation for floating or movable kidney have been very satisfactory. At the same time, he has heard of cases in which the kidney has become detached from its moorings, with consequent recurrence of the trouble. On the other hand, a kidney truss has been necessary to keep the organ in position, and in spite of its discomfort, owing to the considerable pressure necessary, the patients have got used to the instrument and have derived benefit therefrom. Other patients seem to do perfectly well by using a pad stitched into the corset; the important point in this matter is, he believes, that the pad should be made of the shape of an inclined plane, thickest below and narrowing above. Some patients seem to get perfectly well by undergoing a rest cure, lasting for some six weeks, and being fed with the idea of increasing the fat of the patient and so anchoring the kidney in a normal fashion. A great many patients prefer to make this the initial treatment, and Abbot-Anderson thinks it is wise, especially in those (the majority) patients who are very thin. When they get up it is advisable, at any rate for the first month or so after treatment, to let them wear some form of support, and if at a future date the symptoms return, the support must be looked on as indispensable.

3. Treatment of Tuberculous Glands.—The greater number of the infections of childhood follow tonsillar and pharyngeal disturbances and, though it is doubtful if more than a small proportion of these are primarily tuberculous, Sutcliffe says it is quite certain that the enlarged glands, which follow an attack of tonsillitis, furnish a very suitable soil for the propagation of tubercle, and that, unless the child is removed to healthy surroundings, and the possibility of further infection diminished by the removal of the infected tonsils and clearing the nasopharynx, they will soon be typically tuberculous. It is at this stage, before caseation has taken place, that the traditional treatment, by rest, fresh air and diet, produces its best results, and in by far the greater number of cases operative or vaccine treatment can be dispensed with. On the other hand, if the glands have existed for more than six months it is probable that caseation has already begun, and that operation will sooner or later be called for.

The essential point in the treatment of these patients is that sufficient rest should be given to the patient. The cases in which apparent benefit has resulted from the use of tuberculin, that is to say, when the glands have quickly disappeared, are those that would have recovered equally well without it, and certainly the observation of children, treated with and without tuberculin, has revealed no perceptible difference in the rate of absorption of affected glands, whatever its effect on the opsonic index may have been. If given, it must be used with caution, as too large a dose in children will produce a very serious reaction. The appropriate dose for each child can only be determined by experiment on the patient himself. Except in those few children who show extraordinary susceptibility to tuberculin, a dose of one fifty thousandth of a milligram, increased after two weeks to one twenty-five thousandth of a milligram, does not seem to be followed by any bad symptoms. Dietary considerations must be dealt with on common-sense principles. Where sinuses exist, as the result of the bursting of a superficial collection of pus, an operation is usually called for to remove the deep-seated gland that is the cause of the trouble. In the after-treatment of these cases, especially if the dissection has been an extensive one, a considerable amount of rest is required. Sutcliffe usually keeps the child lying down for at least a fortnight, the neck being bandaged with a fairly voluminous dressing to act as a splint. It is especially after the glands have been removed that tuberculin is of some slight service. Sutcliffe usually waits at least a month after operation before giving it, and then uses the doses, previously referred to, for about three months. His impression is that the thickening, if present, clears up more rapidly, and infection in neighboring areas takes place less frequently, when tuberculin is used.

5. Anemia Associated With Rickets.—Ashby believes that splenic anemia is simply a secondary anemia, due to some cause common to these anemias, such as a toxin absorbed from the intestinal tract. In support of this view, he says, is the fact that we can trace cases starting from a simple slight anemia in mild rickets up to the severe anemia, with enlarged spleen seen in splenic anemia. There is no hard-and-fast line between these anemias, and it is impossible to say exactly just where one type passes into the next. On these lines it is much more rational to ascribe the anemia, known as splenic anemia in children, as a secondary anemia, pure and simple. Some physicians have described splenic anemia as being connected with congenital syphilis, but in none of his cases has Ashby been able to find any history or signs of the disease.

8. Treatment of Eczema.—For acute weeping erythematous eczema Meachen uses a calamine lotion applied on lint to relieve the irritation and smarting, thus:

R.	gm. or c.c.		
Calaminæ	8		3ij
Zinci oxidi	4		3j
Glycerini	2	or	3ss
Aq. calcis	ad 180		3vj

Misce, ft. lotio.

On the leg, lead lotion is often best, and it may be combined with the calamine lotion in equal parts. When the exudation has practically ceased, apply powders or ointments. Of the former the oleopalmitate of zinc is useful, and it may be mixed with one-half its weight of powdered starch. A zinc cream is a favorite with Meachen:

R.	gm. or c.c.		
Zinci oxidi	30		3j
Adipis lanæ	8	or	3ij
Olei olivæ, aq. calcis, ana partes æquales	ad 120		3iv

Misce, ft. cremor.

In papular and vesicular eczema Lassar's paste finds application in many cases, especially on the legs. To it may be added salicylic acid, ichthyol, etc., according to the effect to be obtained. Should a more drying, supporting and resolving effect be desired, as in eczema of the lower limbs, perhaps associated with varicose veins, then Unna's paste is a capital application. Meachen uses the following formula:

R.		
Gelatini	partes	ij
Aquæ		v
Zinci Oxidi		ij
Glycerini		v

Misce. Flat Pasta.

Ichthyol and salicylic acid are both useful in eczema of the palms, while in the case of the fingers, Unna's zinc and sulphur paste is often most beneficial kept constantly applied. The formula is as follows:

R. Zinci Oxidi, Sulphuris Praecipitatis,
Cretae Praeparatae, Olei Lini,
et Aq. Calcis, "Equal parts by weight of each."

This should be rubbed in at night, the hands being covered up with gutta-percha tissue, and the whole fixed with a bandage. For chronic eczema the following ointment may be applied continuously on lint:

R.	gm. or c.c.		
Liq. carbonis deterg.	2		3ss
Hydrargyri ammonii chloridi		66	or gr. x
Petrolatum mollis	ad 30		3j

Misce, fiat unguentum.

Or the lenigallol ointment can be used, gradually increasing the strength up to one dram to the ounce. If little or no reaction be obtained by these remedies, an ointment containing carbolic and salicylic acids may be employed, thus:

R.	gm. or c.c.		
Acidi carbolici			
Acidi salicylici	ana 0.66	1	33 or x-xx
Adipis lanæ	ad 30	or	3j

Misce, fiat ung

Success in the treatment of eczema, Meachen says, can only be achieved by a patient and persistent trial of the remedy that is decided on, the local effects being carefully watched and the application varied accordingly, while the fact must ever be borne in mind that it is the whole patient that is being treated, and not his skin alone.

Clinical Journal, London

April 24, XL, No. 3, pp. 33-48

12 Dangers and After-Effects of Anesthesia. D. W. Buxton.
13 Intestinal Obstruction. S. Taylor.

May 1, XL, No. 4, pp. 49-64

14 Visceroptosis and Its Treatment. R. M. Leslie.

May 8, XL, No. 5, pp. 65-80

15 Acidosis. A. P. Beddard.
16 *Swellings of Chest-Wall. H. M. Davies.
17 Oral Sepsis, Metastatic Infection and Vaccine Therapy. D. W. Carmalt-Jones.

May 15, XL, No. 6, pp. 81-96

18 Diabetes. W. P. Herringham.
19 Common Mistakes in Diagnosis of Diseases in Women. F. J. McCann.
20 Some Common Disorders of Nutrition in Infancy. H. C. Cameron.

16. **Swellings of Chest-Wall.**—The following points are emphasized by Davies: (1) It is of the utmost importance not only to diagnose the nature of the tumor, but also to localize the primary seat of the lesion; that is to say, the diagnosis must be complete both on the negative and positive side. To ensure this a skiagram must be taken, and possibly several from different aspects. (2) A tumor that has an impulse on coughing does not necessarily communicate with the interior of the chest-wall. (3) Pressure on, or displacement of intrathoracic organs may be produced by tumors originating from the chest-wall as well as from tumors of the mediastinum and lungs.

Australian Medical Journal, Melbourne

April 13, I, No. 29, pp. 429-440

21 Infant-Feeding at Ashfield Home for Infants. A. E. Mills.
22 Hydatidiform Mole and Chorea in Pregnancy. H. S. Bush.
23 *Curious Surgical Coincidence. D. A. Greenham.

23. **Surgical Coincidence.**—Two cases are cited by Greenham. A man, aged 24 years, was admitted to hospital complaining of severe abdominal pain. The onset had been sudden, and he had in fact been awakened out of sleep by its occurrence about midnight. A tentative diagnosis was made of perforated duodenal ulcer, and the patient was operated on at 7 o'clock the same morning, an interval of about seven hours having elapsed between the probable moment of perforation and operation. On opening the abdomen a perforation was found on the anterior surface of the duodenum just beyond the pylorus. The perforation was sutured over, and a posterior gastro-enterostomy performed. The abdominal cavity was freely drained by tubes passing through both flanks into the renal fossa, and a third into the pelvis. The patient recovered gradually without any complication, the pulse-rate never exceeding 90 per minute after the second day. Three days prior to the discharge of this patient his brother, aged 18 years, was admitted to the same ward also suffering from severe abdominal pain. He had been in to visit his brother at midday and was then apparently in the best of health. An hour and a half later he was seized with acute pain, and returned at once to the hospital. About an hour and a half after admission his abdomen was opened and a perforation of the duodenum was found almost in precisely the same spot as had occurred in the brother's case, except that here it was a little further to the right. A posterior gastro-enterostomy was done after suturing over the perforation. The abdomen was drained by a metal tube in the right flank, followed by a right-sided decubitus, and the patient made an uninterrupted recovery.

Australasian Medical Gazette, Sydney

April 13, XXXI, No. 15, pp. 378-404

24 Significance of Intermediate Hospitals. J. W. Barrett.
25 *Treatment of Hydatid Cysts. P. T. Thane.
26 Doctrine of Complexes. C. G. Jung.
27 Psycho-Analysis. S. Freud.

Archives Générales de Chirurgie, Paris

April, VI, No. 4, pp. 373-496

28 *Ankylosis of the Jaw. (Trismus par ankylose osseuse temporo-maxillaire.) M. Donati.
29 *Diffusion of Urine Through Lesion in Prostate. (2 cas d'infiltration d'urine d'origine prostatique.) L. Thévenot and E. Michel.
30 *Operative Treatment of Gastro-Intestinal and Peritoneal Tuberculosis. (Traitement chirurgical de la tuberculose abdominale en général et des tuberculoses gastro-intestinale et péritonéale en particulier.) P. Mauclaire.

28. **Ankylosis of the Jaw.**—Donati reports a case in which he cured a 9-year-old boy of trismus resulting from bilateral bone ankyosis of the temporomaxillary joint. There has been no tendency to recurrence during the two years since, and the rectangular linear scar in the edge of the hair and in front of the ear on each side is scarcely perceptible now. Extensive resection of bone is indispensable for success, as he describes in detail. The experiences with the technics used by others are reviewed.

29. **Diffusion of Urine Through Lesion in Prostate.**—In the two cases reported subacute inflammation of the prostate modified the tissues until they permitted the sudden diffusion of urine into the cellular tissue in the perineal region. Thévenot and Michel think that this infiltration of urine occurs more commonly than is generally recognized. Palpation through the rectum will generally reveal the primary process in the prostate, and in operations to cure the infiltration the primary process should be treated without fail. Conditions in the prostate must be restored approximately to normal to ensure against recurrence of trouble.

30. **Operative Treatment of Gastro-Intestinal and Peritoneal Tuberculosis.**—Mauclaire reviews his experiences in forty-one cases, comparing them with the records of operative treatment that have been published by others. The evidence shows the great progress realized from surgical measures in tuberculous processes in the digestive tract and peritoneum in the last twenty years, but the responsibility for the success of operative measures rests on the attending physician's diagnosis of the process in time. Mauclaire remarks that a simple laparotomy alone may sometimes improve and cure quite extensive tuberculous lesions in the ileocecal region, although the reason for the benefit is still a mystery. Alglave has reported fourteen survivals and seven with postoperative fistulas in twenty-seven such cases. In tuberculous peritonitis, reports of benefit from a simple laparotomy are conflicting. Some recent statistics report 50 per cent. of the patients cured, while Küttner's latest figures show after a three-year interval 26 per cent. cured of twenty-nine patients with the ascitic form; 10 per cent. with the form without effusion. He regards fever as a contraindication to operative treatment. In a few cases Mauclaire drained the ascites into the subcutaneous tissue by having the patient wear permanently a T drain, the stem pushed into the pelvis, the short crosspiece resting in the cellular tissue, and the soft parts sutured together above. In one case suppuration developed in the soft parts after six months, and the drain was removed, but by that time the patient was cured of the tendency to ascites.

Lyon Médical, Lyons

May 5, XLIV, No. 18, pp. 961-1004

31 *Indications for Isolation in Treatment of Neurasthenia. (Indications de la cure d'isolement.) Feuillade.

31. **Isolation in Neurasthenia.**—Fatigue, Feuillade declares, that worm in the ripe fruit, is the enemy with which man has to contend in our civilization. Fatigue, especially when accompanied by emotional reactions, leads to a general depression—exhaustion. This is the source of all neurasthenia. It is by no means purely psychic; a neurosis is merely a nervous affection with lesions which still escape detection. He advocates the Weir Mitchell treatment in every case of neurasthenia, for ten days in the mild cases, and from two to six weeks in the more severe, and insists that the course should never be attempted in the home. Persons who have been overworked, those deficient in will power and those who are unduly irritable, especially those with some chronic constitutional disease, diabetes, exophthalmic goiter, etc.—in short, all who get nervous and irritable at home or who need a firm hand to guide

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them in a rational course of treatment—such patients benefit amazingly from relative isolation, that is, an occasional change of air and scene away from their family, traveling or at a sanatorium for a time. Attempts to isolate such patients in the home have always failed in his experience. The patients can return home for a weekly visit, gradually lengthening it, or can stay at some relative's, thus returning by degrees to the home environment.

Presse Médicale, Paris

May 8, XX, No. 38, pp. 405-412

32 Technic for Resection of Male External Genital Organs. (Emasculation totale.) E. Juvara.

May 11, No. 39, pp. 413-424

33 Infant Consultations. (La consultation obstétricale de nourrissons.) E. Bonnaire.

34 Pathogenesis of Typhoid Intestinal Lesions. (Pathogénie de l'entérite typhique.) C. Richet, Jr., and F. Saint Girons.

May 15, No. 40, pp. 425-432

35 Treatment of Syphilis. E. Gaucher.

Revue de Gynécologie, Paris

April, XVIII, No. 4, pp. 353-464

36 *Uterine Tumors in Hermaphrodites. (Fibrome utérin chez une femme pseudo-hermaphrodite, accompagné d'une tumeur d'une des capsules surrénales.) Auvray.

37 *Treatment of Stab and Firearm Wounds of the Liver. (Traitement des blessures du foie dans les plaies pénétrantes de l'hypocondre droit.) M. Patel and R. Loaec.

36. Uterine Tumors in Hermaphrodites.—In Auvray's case a female pseudohermaphrodite had a fibroma in the uterus and a tumor of embryonal origin in one adrenal. He has found records in the literature of five cases of uterine cancer in hermaphrodites, six of a benign uterine tumor and thirty-six cases of a malignant tumor in the adrenals and fourteen of a cyst. He summarizes them all, calling attention to the frequent coexistence of tumors in the adrenals with a special type of hermaphrodite with female internal and male external genital organs. Apert reported in 1911 ten cases in which hyperplasia of the adrenals was accompanied by deformities or dystrophies, the character of which varied with the age at which the adrenal hyperplasia developed. If early embryonal, this special hermaphroditism results; Auvray's case is a typical example of this class. He advocates the transperitoneal route of access to the adrenals. In the nine lumbar operations the outcome was fatal in five.

37. Stab and Firearm Wounds of the Liver.—Patel and Loaec discuss the proper technic for simple penetrating injuries of the liver, reporting a case in which they successfully sutured the wounds made by a bullet, thus arresting threatening hemorrhage. They compare this experience with thirty-seven similar cases on record and ninety-three cases of stab wounds, devoting ten pages to tabulation of this material.

Revue Médicale de la Suisse Romande, Geneva

April, XXXII, No. 4, pp. 281-336

38 *Sunlight in Treatment of Primary Tuberculosis of the Conjunctiva. (Héliotherapie de la tuberculose primaire de la conjonctive.) Rollier and G. Borel.

39 Correction of Rachitic Deformity by Osteotomy and Fixation by Screws. (Redressement des déviations rachitiques invétérées des membres supérieurs et inférieurs par Osteotomie et Ostéosynthèse—fixateur de Lambotte.) A. Machard.

38. Light in Treatment of Tuberculosis of the Conjunctiva.—Rollier and Borel give a colored plate of the findings in a case of a primary tuberculous process in the upper lid of the right eye of a young man. He was a medical student from Argentina and the eye had become infected at a necropsy, pus squirting into this eye as a tuberculous cavity was incised. After curetting twice, systematic exposures to the direct sunlight were begun, the patient turning back first the upper and then the lower lid and exposing them in turn to the direct sunlight for a few minutes and then for a time with the eyes closed. The sittings were gradually lengthened until six of ten minutes each were given during the day, supplemented by a local sun bath for a secondary cervical lymphadenitis. In three months the tuberculosis seemed to be entirely cured, and there has been no sign of further trouble during the six months since. At the Finsen Institute in Copenhagen the conjunctiva was found more tolerant even than the skin to phototherapy in four cases of primary tuberculous conjunctivitis. The sunlight in the above case caused no disturbance in the circulation or photophobia, and the conjunctiva is now smooth and thin, absolutely normal. Heliotherapy, they remark, is the only method of treatment which heals without leaving any trace of the former lesion.

Semaine Médicale, Paris

May 15, XXXII, No. 20, pp. 229-240

40 *Acute Dilatation of the Stomach. (Les formes médicales de dilatation aigue de l'estomac.) L. Cheinisse.

40. Medical Forms of Acute Dilatation of the Stomach.—Cheinisse remarks that acute dilatation of the stomach not due to pyloric obstruction may occur from a number of causes, as he shows by citations from the literature. The most important point is the early recognition of the trouble. In a case even within the last six months, he says, postoperative distention following a few days after an appendix operation was taken for beginning typhoid fever, and its true nature was not recognized in time to save the patient. Most often the acute dilatation simulates peritonitis and is treated only as such, but the absence of fever should exclude this diagnosis. The stomach may stretch far downward and the distention thus be most marked in the lower abdomen. The surgeons are on the alert for postoperative trouble of the kind, and countless patients have been relieved and saved by a change to the ventral or knee-chest position when signs of acute dilatation of the stomach have followed an operation. But physicians generally are not aware that the same trouble can occur under purely medical conditions, that is, during the course of or convalescence from typhoid, pneumonia, puerperal fever, cholera or other infectious diseases, or from errors in diet alone, as after drinking a large amount of carbonated water. In the earlier recorded cases the dilatation always proved fatal, as its mechanism was not understood and combated. The stomach pump will decide the question by siphoning out a large amount of stomach content, mixed with gas, and giving immediate relief. Even in the most apparently desperate cases one should never hesitate to use the stomach pump, and it will often prove the means of cure. In one case on record the acute dilatation developed after an amusing entertainment in the hospital, during which a young man under treatment for gonorrhea had laughed long and heartily. This case sustains Mathieu's opinion that air getting into the stomach is an important factor in the acute dilatation. As the condition is becoming better recognized, the number of cases encountered is on the increase. Fussell last year reported five, and found records of six other cases in which acute dilatation occurred during convalescence from pneumonia.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXII, No. 3, pp. 265-349. Last indexed May 4, p. 1404

41 *Immunity to Tuberculosis. (Ueber Immunität gegen "natürliche" Infektion mit Tuberkelbazillen.) P. H. Römer.

42 *Origin of Tuberculosis. (Kritisches und Antikritisches zur Lehre von der Phthiseogenese.) P. H. Römer.

43 *Circumcision in Origin of Tuberculosis. (Zur Frage über die Ansteckung an Tuberkulose jüdischer Kinder während der Beschneidung.) I. M. Arluck and I. J. Wlnocouroff.

41. Immunity to Tuberculosis.—Römer's extensive research confirms anew the fact that an experimental or naturally acquired tuberculous process seems to render the individual immune to further infection with the tubercle bacilli.

42. Origin of Tuberculosis.—Römer discusses the importance of massive infection with tubercle bacilli in childhood as the cause of phthisis in later life. Protection of children against tuberculosis is the keynote struck by all the new data learned in regard to the nature and origin of tuberculosis. The new tuberculin tests provide the means for intelligent control of conditions in children.

43. Tuberculosis Acquired at Circumcision.—In the case reported there was no tuberculosis in the environment and the healthy Jewish mother nursed the infant. It died of tuberculosis at the age of 6 months; besides the ulcerated condition of the entire external genitals, ulceration was found at six points in the small intestine and one in the large. The lymph-nodes, up to the neck, also showed tuberculous changes. There seems to be no doubt that the tuberculosis in this case developed from the rite of circumcision, performed by outsiders.

Berliner klinische Wochenschrift

April 29, XLIX, No. 18, pp. 825-876

44 Affinity of Cancer Tissue for Certain Drugs. (Chemotropismus in neoplastisches Gewebe.) R. von den Velden.
45 Roentgenotherapy of Uterine Myomas. E. Falk and E. Gräfenberg.
46 *Blunders in Diagnosis of Sciatica. (Fehldiagnosen bei Ischias.) W. Alexander.
47 Metastatic Mammary Cancers. (Fall von Beckensarkom mit Metastase in der linken Mamma. Zugleich ein Beitrag zur Lehre von der lokalen Kalkmetastase.) H. Plew.
48 Rat Bite Sickness. (Zur Kenntnis der Rattenbissskrankheit.) F. Proescher.

May 6, No. 19, pp. 877-924

49 *Congenital Tuberculosis. A. Dietrich.
50 Iodized Bacillary Substance in Treatment of Tuberculosis. (Zur Chemotherapie der Tuberkulose.) G. Kapsenberg.
51 Action of Hormonal. (Ueber Hormonalwirkung.) W. Kausch.
52 Physiologic Importance of the Normal Intestinal Flora. (Bedeutung der normalen Darmflora.) M. Klotz.
53 Histologic Findings After Fatal Methyl Alcohol Poisoning. (Ueber histologische Befunde im Auge und im centralen Nervensystem des Menschen bei akuter tödlicher Vergiftung mit Methyl-Alkohol.) L. Pick and M. Bielschowsky.
54 Colloidal Gold Precipitation Test of Cerebrospinal Fluid. (Ueber die Ausflockung von Goldsol durch Liquor cerebrospinalis.) C. Lange.
55 *Abstention from Carbohydrates Powerful Aid in Eradication of Oxyuris. (Zur Behandlung der Oxyuriasis.) H. Stettiner.
56 Elephantiasis. H. Coenen.

46. **Blunders in Diagnosis of Sciatica.**—Alexander has found in the course of his experience with hundreds of cases of sciatica that blunders in diagnosis were comparatively frequent, physicians sending patients to him with this diagnosis who in reality had some other affection, such as disease of the pelvis or vertebræ, intermittent limping, adhesions left from appendicitis compressing the nerve, tuberculosis of the ureter, myomas, rectal cancer, flat-foot, etc. With neurasthenic pain the lack of objective symptoms and the facts that the pain is constant rather than paroxysmal, while it fluctuates with the mood and with insomnia, and that the attention cannot be diverted from the pain, and that the patient begins to groan when the foot is grasped for the Lasègue test, while in true sciatica pain is not experienced until the leg is raised to an angle of 45 or 60 degrees—these features exclude true sciatica. Alexander has encountered only one case of sciatica with a history of preceding attacks of gout or kidney colics, and he has rarely found any objective signs of gout with sciatica. He has been impressed by the absence of neuritis in gouty patients in contrast to its common occurrence in other constitutional toxic affections, such as diabetes. It would be interesting, he remarks, to study in an extensive series of sciatica cases the frequency of objective manifestations of disturbances in the purin metabolism. Spondylitis, sacroiliac disease or stretching of the symphysis in a wasting disease or pregnancy, and senile hip-joint disease frequently develop sciatic pain as the first symptom, but the insidious course, the roentgenoscopic findings and the pain in the hip joint when the flexed leg is passively moved, differentiate the affection. In one case a large sarcoma in the femur was the cause of the supposed sciatica, but it had been overlooked, as no one had thought of palpating the femur its entire length. Osteomyelitis was the trouble in another case, in which no one had taken the temperature, and the tender point was interpreted as a Valleix point, and the pain as the leg was raised was taken for the Lasègue sign. With sciatica the pain is generally worse on rising and at the first steps, while the reverse of this is observed with intermittent claudication. In one case the trouble proved to be intermittent limping, and this in turn was traced to an aneurysm in the popliteal artery. With tabes the pain is generally bilateral and independent of active or passive movements; instead of the Lasègue sign, there is hypotonicity without pains. He has never encountered sciatica in a tabetic nor a case of sciatica traceable to flat-foot alone. The sacral form of multiple sclerosis is hard to distinguish from true sciatica. Flat-foot disturbances are generally in the muscles, especially at their points of attachment, and they subside during repose, as also the pain from varicose veins. In one case a young woman had been under treatment for a year with all kinds of remedies for the supposed sciatica but without effect. The Wassermann test was then applied, with a positive reaction, and four days of iodid treatment banished the "sciatica" permanently. The only means to avoid blunders in diagnosis of sciatica is by repeated examinations. This is especially important in the cases of a relatively harmless and transient neuritis affecting the sciatic nerve and other spinal nerves and suggesting for a time a serious spinal affection.

49. **Congenital Tuberculosis.**—Dietrich reports a case which he thinks must be accepted as an instance of congenital tuberculosis. A moribund woman with miliary tuberculosis was delivered of a child that was removed to another environment at once and never came in contact with the mother. The child thrived for a time but general tuberculosis developed, to which it succumbed at the age of three months. Tubercle bacilli had been found in the placenta.

55. **Diet in Treatment of Helminths.**—Stettiner found it impossible to exterminate the oxyuris in a number of cases, especially in one patient who had been treated perseveringly for oxyuriasis for years but never with more than transient benefit. Finally the patient developed diabetes and the diet was regulated to exclude carbohydrates. Under the influence of this change in the diet the oxyuris disappeared. Since this experience Stettiner orders an antidiabetic diet as an adjuvant to the usual measures in seeking to expel the oxyuris, and reports the prompt cure of four patients under this régime. Another patient, a child, did not conform to the directions and success has not been attained in this case as yet. His experiences suggest that the oxyuris or its eggs require some special medium for their development which is lacking when carbohydrates are not supplied in the food.

Deutsches Archiv für klinische Medizin, Leipsic

CVI, Nos. 3-5, pp. 219-430. Last indexed May 25, p. 1637

57 Residual Nitrogen in Urine. (Der Reststickstoff in seinen Beziehungen zur Urämie und zur Prognose von Nephritiden.) H. Strauss.
58 Hemolytic Jaundice; Four Cases in One Family. (Ueber familiären hämolytischen Ikterus. Vorkommen von Gallenfarbstoffen im Blut und im Harn.) L. Pel.
59 Scleroderma with Calcification. (Ueber diffuse Sklerose von Haut und Muskeln mit Kalkablagerung.) C. Oehme.
60 Extensive Focus of Acute Myelitis from Abscess in Prostate, with Necropsy. O. Gross.
61 Streptococci in Scarlet Fever. (Streptokokken bei Scharlach.) P. Jungmann.
62 Perforation of Stomach Into the Colon. (Die klinische und radiologische Diagnose der Fistula gastro-colica.) N. Voorhoeve.
63 Myeloblasts in Leukemia. (Myloblastenleukämien und Vorkommen von Myeloblasten bei gewöhnlichen Myelämien.) E. Steffler.
64 Cholesterin in Bile. (Der Gehalt der menschlichen Galle am Cholesterin und Cholesterinestern.) R. J. S. Pelrce.
65 *Pathology of Chronic Nephritis. W. Frey.
66 The Blood Plates. (Klinische Untersuchungen über Blutplättchen.) Port and Akiyama.
67 General Infection with Colon Bacilli; Seven Cases, All with Recovery. (Ueber Allgemeininfektion durch Bacterium coli commune.) O. Brian.
68 Facial Paralysis of Rheumatic Origin. (Bemerkungen zur Aetiologie der rheumatischen Facialislähmung.) K. von Kelly.

65. **Chronic Nephritis.**—On the basis of his study of the pathology of different forms of nephritis, Frey says that the power of concentration possessed by the kidney is by far the most important element for the diagnosis. If there is stagnation of urine with hypertrophy of the heart and high blood-pressure, the trouble is a vascular affection of the kidney. Pronounced hypertrophy of the heart renders less probable a parenchymatous affection. With vascular contracted kidney, restriction to a milk diet is advisable merely as a general measure to spare the organism as a whole and ward off new circulatory disturbances; it is not necessary from the standpoint of the kidney alone. The principles for treatment are the same here as for arteriosclerosis and plethora in general.

Deutsche medizinische Wochenschrift, Berlin

May 9, XXXVIII, No. 19, pp. 881-928

69 *Epilepsy. (Der Status epilepticus.) P. Jödicke.
70 Antigens for the Wassermann Reaction. (Beitrag zur Biologie der Lipoide.) F. Munk.
71 Anaphylaxis from Organ Extracts. (Ueber die anaphylaktische Vergiftung durch Organextrakte.) J. Bauer and F. Wüstnoff.
72 *Tubercle Bacilli in the Blood. (Ueber den Nachweis von Tuberkelbazillen im Blute bei Lungentuberkulose und seine prognostische Bedeutung.) R. Hilgermann and J. Lossen.
73 Functioning of Diaphragm After Section of Phrenic Nerve. (Experimenteller Beitrag zur "Zwerchfellbewegung nach einseitiger Phrenicusdurchtrennung.") Stuertz.
74 Urobilin and Bilirubin in Human Serum. (Vorkommen von Urobilin und Bilirubin im menschlichen Serum.) L. Syllaba.

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75 Apparatus for Artificial Respiration. (Ein Apparat für künstliche Atmung.) K. A. Fries.
76 Immunization Against Hay Fever. (Immunisierung gegen Heufieber.) T. Albrecht.
77 Importance of Drinking More Water. (Gesteigerter Wasserverbrauch in der Diätetik.) L. Stanowski.
78 *General Spinal Anesthesia. (Die allgemeine Rachianästhesie.) T. Jonnesco.

69. **Status Epilepticus.**—Jödicke introduced over a year ago in the Stettin asylum a combined method of treating status epilepticus, and has not lost a patient from it since. He reports the details of the nine cases in which it was applied, calling attention to the almost epidemic occurrence of the status during the period of intense heat last summer. The aim of the treatment is to exclude all exciting causes and reduce the auto-intoxication, the influence of which on the abnormally excitable brain is causing the succession of attacks and fever. The patient is put to bed at once in a quiet, darkened room, and one or several tepid enemas are given, followed by introducing into the rectum 3 gm. amylene hydrate with 10 drops of strophanthus to sustain the hart. If the discharges of motor nerve force keep up in undiminished intensity, he repeats this dose after half an hour to an hour. He then draws from 50 to 150 c.c. of blood from a vein at the elbow and infuses from 100 to 500 c.c. of salt solution (Ringer's formula) into the subcutaneous tissue below the pectoralis muscle. Some of the patients in the cases recuperated as if by magic under this treatment when they seemed actually moribund from exhaustion, temperature 40.9 C. (105 F.). The spasms gradually ceased and the patient dropped into a quiet sleep with profuse perspiration, like the crisis in pneumonia. One of the patients nine months later had a recurrence of the status epilepticus. Jödicke's experience teaches the dangers of suppressing bromids in epilepsy. In each of his nine cases the status epilepticus developed when the dosage of bromids was being reduced. He adds a table to show that there has not been previously for ten years a twelve-month period free from a death in status epilepticus, and the total in the ten years has been thirty-seven of the 340 deaths. The asylum has sheltered from 330 to 386 epileptics each year during this time.

72. **Tubercle Bacilli in the Blood.**—Tubercle bacilli were found in the blood of seventeen out of sixty-four patients with pulmonary tuberculosis examined. No connection between them and the fluctuations in temperature could be determined, but the course of the disease seemed less favorable with the positive findings in the series reported.

78. **General Spinal Anesthesia.**—Jonnesco reiterates that his technic is "the method of the future," and states that it has now been applied in 5,151 cases, all but 206 in his country, Roumania. He adds that no fatality from it occurred last year. (This method was described in THE JOURNAL, 1909, liii, 1831).

Medizinische Klinik, Berlin

May 12, VIII, No. 19, pp. 767-808

79 Arteriosclerosis and Digestive Disturbances. (Arteriosklerose und Verdauungsstörungen.) A. Pick.
80 Climatic Factors in Treatment of Cardiovascular Disease. (Klimatotherapie bei Herz- und Gefässkrankheiten.) H. Determann.
81 Treatment of Fracture from Standpoint of Function. (Das funktionelle Moment in der Frakturenbehandlung.) P. Jottkowitz.
82 Tuberculous Erythema Nodosum. (Die ominöse Form des Erythema nodosum.) A. M. Kober.
83 Serodiagnosis of Syphilis. (Die Wassermannsche Syphilisreaktion mit aktiven Seren.) H. Hecht. (Zur Frage der verfeinerten Wassermannschen Reaktion—Kromayer und Tringhese.) A. Alexander.
84 Acute Otitis Media. E. Barth.

Monatsschrift für Kinderheilkunde, Leipsic

May, XI, No. 1, pp. 1-48

85 Favorable Action of Cod-Liver Oil in Rachitis Not Annulled by Long Heating to Boiling Point. (Zur Frage vom Wesen der günstigen Wirkung des Lebertrans bei Rachitis. Ist das wirksame Agens des Lebertrans ein Ferment?) J. A. Schabad and R. F. Sorochowitsch.
86 *Favorable Action of Forced Feeding with an Exclusive Milk-Egg Diet in Children with the Exudative Diathesis from Mild Tuberculosis. (Zur Diätetik der Skrofulose.) E. Moro.
87 Digestion of Wheat Flour and Oatmeal. (Ueber den differenten peptischen Abbau von Weizen und Hafer.) M. Klotz.
88 *Passage of Hexamethylenamin Into Cerebrospinal Fluid. (Zur Kenntnis der Urotropin-Sekretion und Resorption im Liquor cerebrospinalis und die Bedeutung derselben für die Hydrocephalus-Frage.) E. Weinrich.

86. **Diet in "Scrofula."**—Moro found that the manifestations of the exudative diathesis subsided when the children were put on an extra abundant exclusive milk and egg diet. The manifestations of the "scrofula" are not of alimentary origin, as in the true exudative diathesis, but are the work of the tuberculosis, and thus when the tuberculosis itself subsides under tuberculin treatment or out-door living or forced feeding, then the child gradually outgrows the exudative diathesis. Weichert's research has confirmed the empirical observation that fats have a favorable action in tuberculosis while carbohydrates have an unfavorable influence. This explains why potato is bad for the "scrofulous," and why among the poor this condition is more prevalent.

88. **Hexamethylenamin and the Cerebrospinal Fluid.**—Tests revealed the presence of hexamethylenamin even in as small amounts as 1 to 480,000 parts of the fluid. Its passage into the fluid seemed to follow the laws of osmosis. Quantitative color tests are the only reliable technic, Weinrich says, and reports the findings in three cases of serous meningitis or chronic pneumonia, with a case of hydrocephalus following epidemic meningitis.

Münchener medizinische Wochenschrift

May 7, LIX, No. 19, pp. 1025-1089

89 Immunity and Anaphylaxis. J. Traube.
90 *Syphilis and the Nervous System. (Nervöse Spätreaktionen Syphilitischer nach Salvarsan.) G. L. Dreyfus.
91 *Comparative Measurements of Heart with Reference to Size of Chest. (Ein neues Verfahren der Herzmessung—Bestimmung von Lage und Grösse des Herzens im Verhältnis zum Thorax.) S. Kreuzfuchs.
92 *Therapeutic Pneumothorax. II. (Die seröse Pneumothoraxpleuritis.) A. Fagiuoli.
93 *Importance of Laceration of Tentorium in the New-Born. (Bedeutung der Tentoriumrisse für das neugeborenen Kind.) A. Bauereisen.
94 Diagnosis of Arthritis from Local Temperature. (Zur Diagnostik von Gelenkerkrankungen vermittels Messung der lokalen Hauttemperatur.) E. Melchior and H. Wolff.
95 Biologic Tests of Extract of Skin. (Ueber einen biologischen Nachweis der Wirkung von Hautextrakten.) E. Meirowsky.
96 Operative Treatment of Chronic Articular Rheumatism. (Zur chirurgischen Behandlung des chronischen Gelenkrheumatismus.) L. Heusner.
97 The Transverse Fascia Incision in Laparotomies. (Zur Beurteilung des Pfannenstielschen Faszienquerschnittes.) M. v. Holst.

90. **The Cerebrospinal Fluid in Syphilis.**—Dreyfus has been examining systematically the cerebrospinal fluid of patients in the secondary stage of syphilis free from any objective findings in the nervous system and who had had no treatment. In no instance was the fluid found normal; in seventeen of the patients it contained albumin, and in five it was under very high pressure. These findings confirm those of Ravaut who in thirty-three cases found the fluid pathologic in nineteen before treatment and in all but four after salvarsan. The data presented suggest that syphilis in the secondary stage is a septicemia, affecting by predilection the skin and nervous system. Dreyfus commends the practice of systematic control by lumbar puncture of conditions in the nervous system during and following treatment, saying that this in connection with other symptoms may afford a reliable guide to therapeutics and permit the warding off of nervous affections in a later phase of the disease.

91. **Measurement of the Heart.**—Kreuzfuchs gives what he thinks is an instructive formula for estimation of the comparative size of the heart. He first centers the chest by roentgenoscopy; a scrap of lead wire fastened on the median line in front and another opposite it on the back are focused in a single line, and the extreme outline of the heart on the right and left sides is marked where it crosses a horizontal line drawn through the right diaphragm-heart angle. The horizontal line is thus divided into three parts, the width of the heart forming the center stretch. The proportionate length of the three parts averaged in ten persons examined, from right to left 4.2/12; 5/12 and 2.8/12. Dropping the 12, we have 4.2; 5 and 2.8 as a standard for comparison.

92. **Pleurisy with Effusion in Connection with Therapeutic Pneumothorax.**—Fagiuoli noted a pleurisy with effusion developing in ten among his twenty-three patients in whom he had immobilized the lung by inducing pneumothorax. The pleuritis seemed to be in causal connection with the tuber-

culous process in the lung, but it always ran a brief and mild course without interfering ultimately with the outcome of the treatment although rather debilitating the patients for a time.

93. **Injury of Meninges in the New-Born.**—Bauereisen remarks that with the usual method of opening the skull, we overlook the laceration of the tentorium, which closer examination has disclosed to be a comparatively common source for intrameningeal hemorrhage during delivery. He reports the details of eleven cases of the kind found at necropsy of forty-seven infants among 667 born at the Kiel maternity. Delivery had been instrumental in each of the laceration cases and the children had all been asphyxiated at birth; only two could be revived and these died the second day. He comments on the peculiar dangers of swings à la Schultze when the child already shows symptoms of pressure on the brain. Ahlfeld has recently warned against them in all cases saying that all children born deeply asphyxiated, who are capable of being restored to life, do equally well, after the respiratory passages have been cleared, by being immersed in warm water, with other reflex stimuli to the skin. His words apply with special emphasis to children with intracranial hemorrhage. Swinging may even in itself lacerate the tentorium by the pressure on the sides of the head; Bauereisen has seen this occur in an infant cadaver. The clinical laceration of the tentorium may be the manifestation of mechanical injury of certain parts of the brain even when there is no noticeable hemorrhage. Hemorrhages below the tentorium have the least favorable prognosis; death soon occurs from paralysis of the respiration center. But hemorrhage above the tentorium, developing slowly after birth, is amenable to surgical measures. The symptoms are restlessness, screaming, protrusion of the fontanelles, pallor of the skin, deviation of the tongue and head toward the side affected, cortical convulsions and later paralysis. He operated in a case of the kind, relieving the pressure, but the child soon died of meningitis. Benecke has found laceration of the tentorium in a number of infants dying from other affections, emphasizing anew the frequency of this injury and the great liability, even with spontaneous delivery, to injury of the dura at this its weakest point when the skull is compressed from the sides. It should not be forgotten, moreover, that this injury is liable to occur for a time after birth if the skull is roughly handled.

St. Petersburger medizinische Zeitschrift

April 28, XXXVII, No. 8, pp. 119-134

98 Myopia. (Behandlung der Kurzsichtigkeit.) T. Kubli.
99 Pathology of the Gait in Children. (Störungen des Bewegungs-Apparates im Kindesalter.) C. Sarfels.
100 Pathology of Nucleïn Metabolism. (Gicht. Uratsteindiathese.) R. Schütz. Commenced in No. 7.

Therapie der Gegenwart, Berlin

May, LIII, No. 5, pp. 193-240

101 *Cold Packs in Treatment of Fever. (Kussmauls Kaltwasserbehandlung fieberhafter Krankheiten.) A. Cahn.
102 Salvarsan in Scarlet Fever. (Behandlungsversuche mit Salvarsan bei Scharlach.) F. Klemperer and H. Wolta.
103 Digitalis Preparations. (Die hohe Bedeutung der Folia Dig. titrata und ihre Vergleichung mit andern Digitalispräparaten.) Focke.

101. **Kussmaul's Cold Packs in Treatment of Fevers.**—Cahn pays tribute to Kussmaul as the model internist, dwelling in particular on his tendency to draw a favorable prognosis. He brought cold packs into vogue anew in treatment of febrile affections, and Cahn mentions a number of minor points in the technic, neglect of which detracts from the success. Cold sponging off was always done by two persons, one sponging off the limb and the other wiping it dry at once, beginning each sponging off always with the face and neck, and working downward, repeating this from two to four times. All unnecessary movement of the patient was avoided, as an elderly pneumonia patient is liable to dyspnea and collapse if moved much. The physician should aid or superintend the first sponging to note how the pulse, respiration and temperature behave under it. Cold water, frequently renewed, is used for robust patients, but for the weak and elderly, water at room temperature. In applying a cold pack no space must be left where hot moist air can accumulate. The wet cloth must envelop every surface, being tucked around each leg separately. The arms should be drawn up while the pack is applied to the trunk. In typhoid Kussmaul did not apply the Brand baths so cold or so often as most others. The temperature of the water was 25 or 30 C. (77 or 86 F.) and the baths were given every two or four hours from the late forenoon till late in the evening, but not at night. With severe cerebral symptoms he sprinkled cold water from a watering pot on the head and neck, placing the patient across the bed, face downward, the outstretched arms resting in a bath tub, with a rubber sheet fastened at the back of the neck. This roused the patient from his stupor, he swallowed, and fluid could then be given him and he breathed better thereafter. This sprinkling in connection with warm baths has proved useful also in sporadic cerebrospinal meningitis.

Wiener klinische Wochenschrift, Vienna

May 9, XXV, No. 19, pp. 691-734

104 Cancer in Cold-Blooded Animals. (Geschwülste bei Kaltblütern.) M. Plehn.
105 Reasons for Predisposition of Lung Tissue to Tuberculosis. (Biochemische Grundlage der besonderen Disposition des Lungengewebes zur tuberkulösen Erkrankung.) M. Weiss.
106 Paradysentery. (Zur Frage der Paradysenteriebazillen—Teyche-Kruse.) D. Natonek.
107 Vaccination Against Typhoid. (Schutzimpfung gegen Typhus.) F. M. Hartsock (U. S. Army).
108 Suture of Vessels. (Ueber die Gefässnaht und ihre klinische Anwendung.) M. H. Kostic.

Zentralblatt für Chirurgie, Leipsic

May 11, XXXVI, No. 19, pp. 641-672

109 Experimental Exophthalmic Goiter. (Zur experimentellen Erzeugung des Morbus Basedowii.) H. Klose and A. E. Lampe.
110 *Technic for Iodin Sterilization of Field of Operation. (Zur Jodtinkturdesinfektion, zugleich ein Beitrag von metastatischer Entzündung nach subkutaner Verletzung.) F. Brüning.

110. **Iodin Sterilization of Field of Operation.**—Brüning has been applying Grossich's technic for several years with complete satisfaction, using a 10 per cent. solution of iodin. Küttner recently stated that the results were equally good with a 5 per cent. solution, and Brüning changed to this strength. Within a week, however, severe pyemia developed in an operative case and, discouraged, he returned to his old technic with which he had never had any experiences of the kind.

Zentralblatt für Gynäkologie, Leipsic

May 11, XXXVI, No. 19, pp. 593-632

111 *Eclampsia Statistics. (Geschichte der Eklampsiestatistik.) F. Lichtenstein.
112 *Severing the Clavicles to Aid Delivery. (Zur Frage der Kleidotomie.) E. Liebich.

111. **Expectant Treatment of Eclampsia.**—Lichtenstein has been compiling statistics in regard to eclampsia after delivery, and states that eighteen German obstetricians have reported a total of 4,585 cases of eclampsia, of which 955, that is, over 20 per cent., developed post partum. He cites this among other arguments as speaking against the advisability of premature delivery as a therapeutic measure in eclampsia. He writes from the maternity at Leipsic in charge of Zweifel where expectant treatment has been the rule for the past year.

112. **Improved Embryotomy.**—Liebich reports two cases to demonstrate anew the advantages of kleidotomy, that is, of cutting the clavicles when the shoulders are abnormally broad. The vessels in the region were not injured in his cases. The bones would soon heal if the child survived.

Zentralblatt für innere Medizin, Leipsic

May 11, XXXIII, No. 19, pp. 447-468

113 *Functional Dilution Test for the Kidneys. (Ist der Strauss-Grünwald'sche Verdünnungsversuch für Diagnose und Prognose der Nephritis verwertbar und von Nutzen?) B. Goldberg.

113. **Dilution Test of Kidney Functioning.**—Goldberg commends to the general practitioner the Strauss-Grünwald dilution test as a simple and quite instructive means of estimating conditions in respect to kidney functioning, viewed in connection with the results of other tests and objective findings. It is possible by this means to determine the harmless character of an albuminuria, or the tendency toward recovery of actual nephritis, or the progressive nature of the kidney trouble. The patient takes nothing after 7 p. m., but the next morning drinks a pint of water at half past six. The night

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urine is collected and weighed, and also the urine voided at 7, 8, 9, 10 and 11 a. m., recording separately the amount and specific gravity of each portion. In health a corresponding amount of urine is voided during the first three hours, the patient constantly reclining. At 8 a. m. the urine has the lowest specific gravity and by 10 a. m. a pint at least has been voided. The amount voided, time required, specific gravity and variations in the latter are the four points by which this test throws light. As possible sources of error must be borne in mind the psychogenic polyuria of nervous women, and the fact that men over 60 frequently retain at each micturition from 50 to 100 gm. of urine in the bladder although this does not give rise to any symptoms.

Gazzetta degli Ospedali e delle Cliniche, Milan

May 5, XXXIII, No. 54, pp. 561-576

114 Diagnosis of Syphilis. (La diagnosi moderna della sifilide. Siero-diagnosi e cutireazione.) R. Bellantoni (New York).

May 9, No. 56, pp. 585-592

115 Case of Hysteric Gangrene. (Contributo clinico sulla gangrena isterica.) G. Gargiulo.

May 12, No. 57, pp. 593-608

116 *Sea Water in Transmission of Cholera. (Trasmissione di colera per mezzo dell'acqua di mare.) G. Porrini.

116. Sea Water in Transmission of Cholera.—Porrini reports two cases of men who had accidentally fallen into the water in the harbor at Genoa last fall, and who both developed cholera the third or fourth day thereafter.

Policlinico, Rome

May 12, XIX, No. 20, pp. 709-744

117 Changes in Shapes of Bullets Fired from Modern Firearms. (I cambiamenti fisici dei proiettili delle moderne armi da fuoco portatili da guerra.) P. Imbriaco.

May, Surgical Section No. 5, pp. 193-240

118 *Non-Operative Treatment of Surgical Tuberculosis. (Importanza e limiti del trattamento incruento nelle tubercolosi chirurgiche.) R. Alessandri.

119 *Treatment of Diffuse Purulent Peritonitis. M. Fasano. Commenced in No. 4.

120 Excessive Muscle Functioning as Factor in Hernia. (Di un importante coefficiente nella genesi delle ernie.) E. Casati.

118. Non-Operative Treatment in Surgical Tuberculosis.—Alessandri emphasizes the fact that a surgical tuberculous process is a chronic lesion generally secondary to other foci at inaccessible points, and with a tendency to heal when general and local conditions are favorable for this. The aim in treatment should be to modify general and local conditions so as to promote the spontaneous recovery. The part affected should be kept at rest and protected from injury of all kinds, while tuberculin and iodin should be called in to modify the general and local conditions. He advises conservative measures for tuberculous processes of the soft parts, lymph-nodes, tendon sheaths, synovial and serous membranes and male genitals. An operation is generally required when the tuberculous process is in the intestines, female genitals, kidney or nervous system. In bone, conservative measures may answer the purpose in some cases, but in others operative treatment is necessary and these considerations may justify early intervention at once. Open tuberculous lesions, with mixed infection, always require operative treatment unless the superposed infection can be eradicated. If this can be done conservative treatment comes into its own again. Fistulas with scanty secretion may heal under paste treatment, especially bismuth paste.

119. Purulent Peritonitis.—Fasano says that the bacteria in the peritoneum take about six or eight hours to develop; in experimental research, operative measures later than this are unable to save the animals. In the clinic, purulent peritonitis should be treated on the same principles as an abscess anywhere, but much depends on the management of the case after this has been done. Fasano reiterates that the pus is the product of a defensive reaction, not the infecting agent. Mere removal of the pus does not necessarily sterilize the region, and anything that promotes absorption from it enhances the toxic action. He follows Murphy's technic in detail except that he supplements it by injecting into the peritoneal cavity a 5 per cent. solution of thiosinamin to induce local hyperleukocytosis which reaches its highest point in five or six hours. The thiosinamin is harmless, he says, and can be injected daily for several days, each repetition having the same or a magnified effect. He reports ten cases in detail with recovery of six of the patients.

Brazil Medico, Rio de Janeiro

April 15, XXVI, No. 15, pp. 143-152

121 Pathology and Symptomatology of the Adrenals, and Treatment. (Syndromes supra-renaes, lesões das capsulas e seu tratamento.) L. Freire.

May 1, No. 17, pp. 165-174

122 *Chronic Progressive Chorea. (Sobre a chorea de Huntington.) A. de Castro.

123 *Disease of the Spinal Roots. (Algumas notas sobre as radiculites.) J. V. Romeiro. Commenced in No. 16.

124 *Dioradin. H. Autran.

122. Chronic Progressive Chorea.—De Castro has been studying two cases of the rare affection known as Huntington's disease or hereditary chorea. The first patient is a man of 43 free from known hereditary or pathologic taint until the first onset of the chorea five years ago. The twitchings and motor disturbances interfere to some extent with voluntary movements but have not incapacitated the man from continuing his business, although the attention and memory do not seem quite as alert as normal. The affection seems of the Huntington type except for the absence of known inherited taint. The other patient is a man of 66, the father of several healthy adult children. The chorea commenced in this case at the age of 46. The mind has not failed to a notable extent although there are occasional periods of excitement with tendency to suicide. De Castro gives a series of kinematographic representations of an attack, and mentions as a characteristic symptom the loss of the function of arresting one motor impulse and substituting for it an opposite one—adiodokinesia.

123. Disease of the Spinal Roots.—Romeiro discusses the symptoms of radiculitis, the paroxysmal pains or the gradual development of a dull ache The interval between the attacks of pain may be a year or more; an interval of three years is on record. The pains may have many features suggesting tabes. In one case any abrupt movement was liable to bring on an attack of pain, and it always started the most violent paroxysms of pain. This sign is not pathognomonic but it was noted in nearly all the cases on record, as also lymphocytosis in the cerebrospinal fluid. The data suggest that radiculitis and tabes may be merely different manifestations of a single specific meningitis. Romeiro reports a number of cases, stating that the trouble usually is first mechanical, the primary disturbance being some tumefaction or syphilitic lesion.

124. Inefficacy of Dioradin.—This is a communication presented at the April 18 meeting of the Brazil Academia Nacional de Medicina by H. Autran. He stated that he had received a letter from Szendeffy of Budapest and Bernheim of Paris replying to his unfavorable criticism of their product, dioradin, a few months ago (*Brazil Medico*, 1911, xxv, 291-298). Autran read the letter, refuting each of the points raised in turn, citing further from letters received by him from A. Lima, Sr., and Jr., and R. Cezar who had given dioradin an extensive trial at the Dispensario da Liga Brazileira contra a Tuberculose without obtaining good results and had consequently dropped it. He read further a letter containing other unfavorable comments on dioradin from A. Ferrari and O. da Fonseca. Autran remarked in conclusion that he was thus in good company in his denunciation of dioradin, and had no reason to modify his previous unfavorable criticism.

Semana Medica, Buenos Aires

April 11, XIX, No. 15, pp. 693-736

125 *Resection of Elbow. (Las resecciones del codo en las luxaciones antiguas.) G. B. Arana.

126 *Atmolysis. (Atmolisis y atmolizador.) R. Dubois.

April 18, No. 16, pp. 737-780

127 *Catarrhal Inflammation of the Rectum with Obstinate Constipation. (Las rectitis catarrales en la constipacion pertinaz.) C. B. Udaondo.

128 Experiences with Salvarsan in Syphilis. B. N. Calcagno.

125. Resection of the Elbow for Old Dislocation.—Arana gives a detailed report of his experiences in six cases, all confirming the ultimate fine results after partial resection of the epiphysis of the humerus above the line of junction of the epicondyle with the epitrochlea. Resection should be reserved

for the last resort in adults after failure of all other measures perseveringly followed. It should never be applied until after the age of 17; before this, massage, exercise of the joint and electricity should be systematically applied. The incision should be longitudinal and brachial, and before any resection is attempted, efforts should be made to reduce the dislocation. The results grow constantly better with time as the bone regenerates. The more freedom of movement desired, the more bone should be resected, up to 4 cm. Great stress should be laid on the postoperative treatment, especially on the necessity for patience and perseverance on the part of the patient. The functional outcome was surprisingly good in his cases.

126. **Atmolysis.**—Dubois has coined this term to express the action exerted on organic tissue by the fumes of volatile fluids, such as benzin, ether, chloroform, alcohol, etc. He has devised an apparatus for the study of the phenomena involved. He explains them as of osmotic nature and states that they are important aids in physiologic and physico-chemical research and in extraction of therapeutic chemical principles.

127. **Catarrhal Inflammation of the Rectum.**—Udaondo emphasizes the necessity for direct visual inspection as the only means to differentiate positively catarrh of the rectal mucosa from diarrhea of other origin. He has encountered it three times in eighty-six cases of constipation from atony of the bowel. The patients all had long suffered from chronic constipation but the catarrhal affection caused a scanty serous stool every three or four hours. Defecation was painful but no blood was noticed in the stools. The sigmoid flexure was found distended with fecal matters and hard lumps were seen at sheltered points in the rectum while the mucosa was congested and swollen with more or less adherent mucus. The catarrhal trouble may lead to this serous diarrhea or the fecal lumps may be merely coated with mucus. The rectum should be rested by mild laxatives, giving it a chance to recuperate, and small enemas of a weak solution of silver nitrate or other silver salt are advised after each defecation. Left untreated, the condition may lead to serious complications while it yields readily to the above simple measures.

Hygiea, Stockholm

April, LXXIV, No. 4, pp. 386-480. Last indexed May 11, p. 1488

129 *Otitis Media in Scarlet Fever. (Om otitis media perforativa vid scariatina.) G. Holmgren. Commenced in No. 3.

129. **Otitis Media in Scarlet Fever.**—The first part of Holmgren's article was summarized in THE JOURNAL, May 11, p. 1488.

Ugeskrift for Læger, Copenhagen

April 25, LXXIV, No. 17, pp. 649-692

130 Cerebral Localization. (Hjærnelokalisation—særligt Lokalisationen af de sjælelige Funktioner.) K. Malling.
131 Baths for Pregnant and Parturient Women. (Bør fødende og svangre bruge Karbad?) M. le Maire.

May 2, No. 18, pp. 693-722

132 Roentgenoscopy of the Intestines. (Om Røntgenundersøgelser af Tarmkanalen.) R. W. Kiær.
133 *Tardy Manifestations of Inherited Syphilis. (2 Tilfælde af formentlig Lues hereditaria tarda.) E. Clausen.

May 9, No. 19, pp. 723-768

134 Serodiagnosis of Syphilis. (Erfaringer med Hermann-Perutz's Syfilisreaktion.) V. Ellermann.
135 Gastro-Intestinal Diseases. (Om Sygdommene i Fordøjelsesorganerne.) A. Madsen.

133. **Tardy Manifestations of Inherited Syphilis.**—Clausen reports two cases in a brother and sister apparently healthy until about 19 years of age. The young man developed then a process in the leg suggesting ostitis of the tibia, which he ascribed to a trauma. The girl had keratitis and later periostitis in the arm. Both were treated with mercury and iodid and were soon cured, previous operative measures having failed to arrest the affection.

Upsala Läkareförenings Förhandlingar

XVII, Nos. 4-5, pp. 271-392. Last indexed March 16, p. 828

136 *Hydrops of Bile Passages. (Till frågan om hydrops i hela gallvägssystemet.) S. Lindqvist.
137 *Heredity of Deaf-Mutism and Importance of Heredity for Pathology. (Om den konstitutionella dôfstumhetens ärftlighetsförhållanden samt några ord om ärftlighetsforskningens betydelse för sjukdomsläran.) H. Lundborg.
138 Effect on Amphibia of Changes in Concentration of Medium. (Om amfibiernas förhållande i olika koncentrerade lösningar.) E. L. Backman and C. G. Sundberg.
139 *The Molecular Diuresis with Varying Intake of Water. (Om den molekylära diuresens förhållande vid sparsam, resp. riklig vattendrickning och konstant kost.) A. Herne.
140 The Optimum Conditions for Contraction in Frog Muscle. (Undersökning angående läget af belastningsoptimum för musculus gastrocnemius hos groda vid olika intensitet af tetaniserande retning.) A. Aronson.
141 *Non-Malignant Bone Cysts. (Bidrag til kännedomen om de s. k. äkta eller benigna—genuina—bencystorna.) E. Utterström.

136. **Hydrops in Bile Passages.**—Lindqvist summarizes from the literature five cases of hydrops of the entire biliary passage apparatus with chronic obstruction of the common bile duct, published since Kausch's compilation in 1910 of fourteen cases. Lindqvist's series includes a case reported by Berg last year, and he adds to this a case from his own experience. His patient was a vii-para of 38 and the liver extended below the costal arch, occupying nearly the entire right abdomen. Puncture released from the gall-bladder large amounts of a limpid white bile. After systematic draining the liver receded to its normal outline. A few days before her last delivery there had been attacks of pain and the liver had increased in size. It was evident that mild infection had set in and an operation became necessary the day after delivery. Pressure from the gravid uterus plus the increased secretion in consequence of the infection, had caused conditions compelling an emergency cholecystostomy which speedily restored conditions to normal.

137. **Heredity and Disease.**—Lundborg reproduces Fay's tables on the 4,477 marriages of the deaf in America. He then reviews the data in regard to 414 families from his own experience in which 12.3 per cent. of the 2,205 children are deaf-mutes. Comparative analysis of all this material demonstrates, he says, the truth and reliability of Mendel's laws in regard to heredity. These laws illuminate most instructively the nature and biologic workings of consanguineous marriages. They also supplement other data, pathologic, clinical and statistical, in regard to various diseases and clinical entities.

139. **Molecular Diuresis with Varying Intake of Fluids.**—Herne's tables show that on an otherwise constant diet the proportion of solid elements in the urine increases materially when after a period of small intake of water large amounts are ingested.

141. **Bone Cysts.**—Utterström reports a case of a solitary bone cyst in a girl and boy both 6 years old. The pains and spindle-shaped enlargement in the femur or tibia were traced to a trauma two months or two years before. The cyst in the tibia was lined with a brownish membrane which was easily stripped off. The cavity was tamponed with gauze and it gradually healed, filling up with new bone. Roentgenoscopy five months later revealed that the cavity had not entirely filled up while a new cyst was seen to be developing below the old one. It had not caused any pain yet and the contents were only semifluid and there was no membrane lining. The cavity was curetted and it soon healed and filled up, the leg being now, a year later, apparently entirely sound. In the other case the cavity in the femur was as large as a hen's egg and a polyp-like growth protruded into it. This was removed with the lining membrane. The bone fractured in the operation but the lesions all healed promptly and the boy has been entirely well since. Nothing was found on microscopic examination to suggest cancer, but this seemed probable in another case in a boy of 9 who had a cyst in the neck of the femur. Operative treatment disclosed sarcoma-like tissue. Conditions did not suggest that the lesion was very malignant and intervention was limited to curetting the focus. The bone healed completely with no impairment of function and the boy is now, three years later, still apparently entirely well. The findings in the two first cases suggested fibrous ostitis as the cause of the cyst formation and that trauma is a factor, as also some predisposition on the part of the bone. The prognosis is good with prompt operative treatment but it is important to avoid confounding lesions of this kind with the malignant.

JOURNAL Announcements, Knocks and Boosts, Books Received and changes in the Public Service will be found in the advertising section, commencing on the second page following reading matter.

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Society Proceedings

COMING MEETINGS

Michigan State Medical Society, Muskegon, July 10-11.
North Carolina Medical Society, Hendersonville, June 18-20.
Washington, Idaho and Oregon associations, Portland, July 5-8.
West Virginia State Medical Association, Webster Springs, July 10-12.

THE SOUTH CAROLINA MEDICAL ASSOCIATION

Sixty-Fourth Annual Meeting held at Columbia, April 16-18, 1912

The President, DR. J. W. JERVEY, Greenville, in the Chair

Officers Elected

The following officers were elected: president, Dr. Charles M. Rees, Charleston; secretary-treasurer, Dr. E. A Hines, Seneca. The next annual meeting will be at Rock Hill, April, 1913.

The Medical Profession and the Public Health

DR. J. W. JERVEY, Greenville: The people should be taught how immeasurable are the benefits to be obtained by obedience to the laws of preventive medicine; what wonders have been wrought in the conquering of disease and the prolongation of life, and what can be further accomplished, if they will but give us their intelligent cooperation; also, that their children must be carefully instructed in the laws of health. The great molders of the public mind have been and are (1) parents; (2) teachers; (3) politicians; (4) the clergy, and (5) the press.

Another and even greater class must take a hand in the education of the people, the doctors of medicine; because they are necessarily the only class that can give competent instruction in medical subjects, and by giving it will render incalculable service to mankind. The ultimate and certain logical fact is that the welfare and prosperity of a state or a nation depends on the health of its people. We must show our fellow men, first, the dangers that surround them, and next, how these are to be avoided.

It is our present duty (1) to preach, day in and day out, the gospel of education (including the teaching of the principles of health and disease) for our children; (2) to urge on our legislature the fundamental importance of enacting a law for the recording of vital statistics; (3) to continue our efforts in behalf of legislation requiring the medical inspection of school children.

Twenty-Three Consecutive Cases of Gunshot Wounds of the Abdomen, With Two Deaths

DR. LEGRAND GUERRY, Columbia: In all these cases, save the first, thorough irrigation of the abdominal cavity, with salt solution, was employed. I used the Blake two-way irrigator. Just as soon as the abdomen is opened and irrigation decided on, the irrigator is introduced and kept going throughout the operation. Drainage consists of a cigarette drain of iodoform gauze and protective tissue, or a drainage-tube. Every patient of this series was placed in the exaggerated Fowler's position. We need to be most careful in the question of diagnosis, especially in cases in which some doubt exists. My rule is always to explore, unless convinced beyond a reasonable doubt that the bullet has not entered the abdomen. The question of whether to repair or to resect the intestine is a very important point to determine, and this decision alone will influence the tide for or against success. In some cases the intestine is so badly damaged, or the perforations are so close together, or the individual hole so large, that time will be saved and security against leakage safeguarded by resection rather than individual repair. It is an excellent plan, unless definite indications exist, to have the patient transported in the semi-inclined position. The question of present importance to determine is, how extensive a search shall be made for the perforation. About 2 per cent. of cases of gunshot wounds of the abdomen result fatally because of tetanus; therefore I always give them an immunizing dose of antitetanic serum. Administration of the serum should be begun at once.

DISCUSSION

DR. GEORGE W. CRILE, Cleveland, O.: I can recall no other series of perforating wounds of the intestines with such signal success attending operations. Dr. Guerry mentioned hemorrhage as one of the dangers in gunshot wounds. In these cases one might, with advantage, perform transfusion of blood.

DR. CHARLES M. REES, Charleston: I would mention one point in Dr. Guerry's treatment which has not seemed of advantage. At the Roper Hospital we get many cases of gunshot wounds. The shooting among the colored people, and a good many others too, in our section, is done very indiscreetly. We have found the less interference we make there the better for the patient. We have not found that the salt irrigation going on during operation is of any particular advantage—generally an injury. The peritoneum is making a desperate effort to take care of the infection. Free drainage after the operation is an assistance. The peritoneum and bowels should be disturbed as little as possible. When he speaks of cleaning out the peritoneum by irrigations, I think he is attempting something beyond possibility.

A New Method of Operation for Typhoid Perforation

DR. L. B. OWENS, Columbia: A free incision should be made in the right iliac region, and if the peritoneal cavity is filled with fluid and fecal matter, one should be made in the median line and one in the left side. Gauze pads should be placed in the peritoneal cavity during operation to absorb poisonous matter. The peritoneal cavity should not be irrigated, except in elective cases. Intestines should not be handled or pulled out. Drainage-tubes should be placed down where pus is liable to gravitate. I prefer rubber tubes with wicks. Iodoform gauze should be packed loosely about the lower end of the ileum in such a way as not to cause an obstruction. Incisions should be left wide open packed with gauze, compresses being used to keep back the intestines. There will probably be a fecal fistula, which should discharge through the wound in the right side. In most cases Fowler's position is indicated.

I have operated in two cases of typhoid perforation by this method, both being very unfavorable, owing to the fact that neither patient would submit to an operation until the third day after perforation. One died two and a half days after the operation. In the other case perforation occurred ten days after fever and the patient was operated on three days after the perforation. Pulse was 160 just before operation. A certain percentage of cases will be followed by hernia, which can easily be cured by a second operation, which is practically free from danger.

The Present Status of Goiter Surgery

DR. A. B. KNOWLTON, Columbia: In the light of past events it is not surprising that the operation for goiter has had to struggle for a place on the list of established surgical procedures, but this struggle has been made and the net result is that elective operative interference has achieved the undisputed mortality of less than 3 per cent. Prior to 1890 practically every operation that had been done for this condition was done after the patient's condition had become practically hopeless. If the whole thyroid were removed, myxedema ensued; if the parathyroids were removed, or too many of them, tetany and death resulted. If too large a portion of thyroid was removed, the patient would have to live on thyroid gland to make up the thyroid deficiency. Every case should be treated medicinally before operative procedures are recommended.

To simplify the process of selection of cases for operation all cases are grouped under three heads: cancer, adenomata and exophthalmic goiter. In cancer the condition has usually progressed enough so that the patients benefit but little, if at all, by operation. The adenomatous goiters are by far the most frequent type encountered. They rarely produce death, except by malignant or degenerative changes in the

gland structure, and are most favorable cases for operation. The third or exophthalmic group presents the most scientific interest to internist and surgeon alike. This group shows not only anomalies of structure, but of secretion. In this condition the thyroid, for some unknown reason, secretes an increased amount of thyroidin. In this condition it is not at all necessary that the thyroid gland should be enlarged in the least degree, for in some of the most pronounced cases hyperthyroidism coexists with an entirely normal-sized gland.

In the treatment, the physiologic use of belladonna is recommended. The *x*-ray seems to exert a modifying effect on the hypersecretion. The surgical treatment may consist of ligation of one or both of the superior thyroid arteries, with their accompanying veins, or of removal of a portion of the gland itself. If the symptoms continue, one-half of the thyroid is removed. The result is that when the elective hour for operation is chosen, goiter operations are now yielding results second to none in restorative surgery.

DISCUSSION

DR. C. B. EARLE, Greenville: I have had a few cases in which I was very much puzzled to decide whether surgical interference should be attempted or not. I do not know where to draw a sharp line in those cases in which we think that the impairment of the heart is permanent, and those in which recovery is possible. I have been very much surprised at the ability of the patient to repair these cardiac and other changes after the removal of a portion of the thyroid gland.

DR. S. E. HARMON, Columbia: Oftentimes when we accuse ourselves of having cured a patient with drugs, Nature has done the work herself, and I think we should leave it alone, or else deal with it as a strictly surgical condition.

DR. W. J. BURDELL, Camden: I have found that many general practitioners when they decide that a patient has goiter, no matter what form it is, give thyroid extract. It seems that where hyperthyroidism exists, one is just hastening the end of the patient to give him thyroid extract.

DR. S. C. BAKER, Sumter: There is one part that the administration of thyroid extract might play in the treatment of hyperthyroidism, and that is as an aid to diagnosis. I cannot see where thyroid extract is indicated in the cure of hyperthyroid conditions. I have seen patients who seemed to recover after thyroid extract had been administered, but I think it was *post*, and not *propter hoc*. In many cases, tachycardia and certain digestive and nervous symptoms lead us to believe that they possibly are due to an increased secretion of the thyroid, the absorption of which is producing these symptoms. In such cases, if we will give thyroid extract for a short time, and carefully watch the symptoms, count the pulse, and note all the other conditions, and if we see that they are getting worse, we can be pretty well confirmed in our diagnosis of hypersecretion, and that it has been made worse by the administration of thyroid extract. If it has not been made worse, we probably have not a case of hyperthyroidism to deal with, and so we can let it go along and be treated as something else.

Conservatism in the Treatment of Affections of the Ear, Throat and Nose

DR. CHARLES W. KOLLOCK, Charleston: Conservative treatment of acute affections of the middle ear—the chief cause of deafness, chronic middle-ear disease, mastoiditis, brain abscess, etc.—consists of prompt treatment of the throat and eustachian tube and early incision of the drum membrane in order to establish free and unobstructed drainage. In a fair percentage of mastoid cases recovery would take place without an operation, but every case should invariably have constant and careful supervision until all signs of danger have passed. Mutilating operations of the septum and turbinate bones are uncalled for often, when prolonged treatment might preserve them. Even in treating the antra and sinuses, non-operative methods should be given a fair trial if the symptoms are not urgent. I advocate the entire removal of diseased tonsils by enucleation, but simple hypertrophied tonsils which do not interfere with breathing, hearing and swallowing should be left until proved a menace. Adenoids should invariably be removed on account of their situation and likelihood to increase in size at times.

DISCUSSION

DR. J. W. JERVEY, Greenville: There is much unnecessary surgery done on the mastoid process. I have never seen in my own practice a case of mastoid disease that has terminated fatally or badly, and I have seen many patients recover under the conservative plan of treatment. I believe the majority of mastoid operations done in this section are done simply because the preventive measures which could and should have been undertaken have been wholly neglected. Nearly all of us see these cases when attention to the middle ear, and drainage of the middle ear by incision of the drum membrane would result in alleviation of the conditions. Even when there is possibly pus in the antrum, frequently drainage of the middle ear will bring about relief. No one can examine a tonsil and say whether that tonsil is or is not thoroughly diseased. It is merely a question of deduction at which we arrive from clinical experience. I believe that there are many temporary conditions of tonsils which appear to be diseased but which will be restored to their natural function when other diseased conditions are removed. I have seen this demonstrated so frequently that I have made it an almost fixed practice to remove the adenoids and leave the tonsils alone, unless they are evidently and palpably diseased. If there is a simple hypertrophy, with no evidence of chronic, persistent inflammation, no matter how large those tonsils are, unless it is evident that serious embarrassment is going to be caused by extreme enlargement of the tonsils, I leave them there, to see whether or not they will resume their normal size and position after nasal breathing has been reestablished. If they do, well and good. If they do not, I remove them, but I reserve my judgment in each individual case whether I shall do a tonsillotomy or a tonsillectomy.

DR. R. A. GYLES, Blackville: I would like to emphasize the conservative treatment of the mastoid condition. The apparent condition externally does not indicate the character of the diseased organs or the ultimate result of the case. A great number of cases of mastoid abscess, mastoid involvement and nasal troubles, particularly spurs and turbinates, are to-day treated by a radical operation, which is not indicated and not necessary. I remove these when I see that it is necessary, but small spurs, for instance, that do not affect drainage, I let alone.

DR. C. L. KIBLER, Columbia: The treatment I use in general, in suppurating middle-ear diseases, is thorough drainage and cleansing, opening of the ear-drum, free incision, then thorough cleansing of the ear canal, also middle ear. A solution of bicarbonate of soda or boric acid or 1-5,000 bichlorid, followed with some mild astringent. If a chronic condition is present, I use one drop of alcohol, once a day.

Board of Health Powers Increased

Through the combined efforts of the members of the South Carolina Medical Association, an act has recently been passed by the general assembly of the state which increases the powers of the State Board of Health. The board has jurisdiction over the sanitation and disinfection of all passenger cars, steamboats and other vehicles of transportation, and also all public institutions, such as convict-camps, jails, etc., and all places used by or open to the public. The board has the power to segregate and isolate persons having, or suspected of having, any communicable, contagious or infectious disease, and also to regulate the methods of disposition of garbage, sewerage and any like refuse, wherever found. Provision is also made for a thorough investigation and study of the causes of diseases and the means for the prevention of contagious diseases, and for the publication and distribution of such information as may contribute to the preservation of the public health. The board is also empowered to make separate orders and rules to meet any emergency not provided for by the general rules and regulations. There is also a section which makes any violation of this act a misdemeanor, punishable by fine or imprisonment.

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PROCEEDINGS OF THE ATLANTIC CITY SESSION

MINUTES OF THE SIXTY-THIRD ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT ATLANTIC CITY, N. J., JUNE 3-7, 1912

(Continued from page 1812)

President Murphy's Address to the House

In opening the House of Delegates, Monday morning, June 3, DR. JOHN B. MURPHY, Chicago, President, said:

To the Members of the House of Delegates: Permit me to again express to you my sincere appreciation of the great honor you conferred on me in electing me President of the American Medical Association, the largest and, I believe, the most representative body of medical men in the world. This honor is deeply appreciated, and for it I am profoundly grateful.

It has been the custom of the retiring President to deliver in brief his estimate of the activities of the Association during his administration, and to give his opinion as to the lines which should be followed for increasing the force and service of the Association to the public and to the profession. I have not been able to accomplish all that I had hoped for when I assumed the presidential office, but I have made an earnest and honest effort to the full extent of my capacity. Its shortcomings, many as they are, have not been of the heart or desire, but of incapacity. I wish to thank the officers and committees for their work in behalf of the Association during my administration,

The medical profession's interest in the public welfare is axiomatic, supported by the ideals advanced and the practice followed by the medical profession for centuries. An attempt has been made in the superlative degree in the last year to discredit the altruism of the medical profession in its interest and action in its public health welfare. This attack has been so venomous, persistent and outspoken in its unquestionably false accusations which originated primarily from those with personal adverse interests, that it has now become so disseminated and broadcast that many right-minded people are accepting them as true. This has been most conspicuous in the attacks on the national health endeavors of the Association. In other words, the deep-rooted and stealthily cultivated opposition, which was hidden in the past and thus able to exert a most pernicious and adverse influence, has now been forced into the open by the efforts of the American Medical Association, and it is found to consist of those outside of the profession, who, for profit and personal interests or license, prey on the public, such as the patent medicine, adulterated drug and food interests, the Christian Scientists, chiropractics, osteopaths and magnetic healers, fortune-tellers, a small number of the homeopaths and eclectics, and a very small number of the so-called regular profession.

The fact that the work is now in the open imposes an obligation on the profession clearly and forcefully to place before the people regarding the federal health activities the fallacies and misrepresentations of those who have profited privately and stealthily by the negligence and indifference of the national government toward the health welfare of its people. Its position must be stated on every available occasion and occasion sought for its promulgation. Every time that a speaker is advertised to attack the profession, he must be met on the same platform by members of the profession who are informed and capable of placing the medical profession in its actual and true light. Then the victory is ours. The time for assumed impregnability of the profession and dignified silence regarding these charges is past. The issue must be forceful, militant and active if the Association hopes to win for the people the benefits that can accrue from a national health department.

Note what an organized health department service has accomplished for the people in Germany. The mortality from tuberculosis has been cut in two in the last five years. The mortality from diseases of children has been reduced from 18 per cent. to 9 per cent. In this country the activities which produce these results are being fought by a certain class of people, and in a clean-cut anarchistic way. No one can interpret the action of the League for Medical Freedom otherwise than as the action of an anarchistic body against law and order. The question is, will anarchy and license prevail, or will intelligence, freedom and protection dominate the health interests of these one hundred millions of people? The arguments advanced by the League for Medical Freedom spell anarchy and unbridled license, and not intelligent organization and freedom, although many of these good and misguided people do not recognize that their actions are basically anarchistic.

All that is necessary is that the people shall know, and we must tell them, and there will be no trouble then in overcoming the hidden and selfish opposition within the profession, as well as the richly financeered and well organized opposition from without. If we are to obtain a national independent health service it must be done through, first, educating the public, which should be the scope of the Council on Health and Public Instruction; and, second, and not less important, entrusting the legislative work to men of national reputation who are familiar with the details and requirements of legislative enactments. I therefore recommend that the legislative work be transferred from the Council on Health and Public Instruction to a Council on Medical Legislation to consist of five members, to be elected by the House of Delegates, one for five years, one for four years, one for three years, one for two years and one for one year. Thereafter, one member shall be elected each year to serve five years. The Council shall organize and adopt such regulations for the government of its action as is deemed expedient. The Secretary of the Association shall be the Secretary of the Council. The Council shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees and the Board of Trustees shall be instructed to furnish the necessary financial aid.

Through this plan we may hope to secure a federal independent health service and that hope may soon be realized. This Council will need and, I am sure, will receive, as our Committee has received, the hearty cooperation of all of the state societies, and I wish here to express my personal appreciation of the enthusiasm and force with which the state societies have responded when called on.

ORGANIZATION *

The activities in organization have been decreasing from year to year until now they have about reached a standstill. I submit a report of the membership since May 1, 1908.

Number of members May 1, 1908			31,343
Died	290		
Resigned	1,439		
Not eligible	290		
Non-payment	484		
Not found	55		
Total	2,558		
Added by subscription		3,638	
Added by new members		1,512	5,150
A net gain of			2,592
Or a complete membership of			33,935

* [In compiling these statistics regarding organization, the President does not take account of the many instances where men were dropped from the roll one year and reinstated during the following year; also that a large number of those each year entered as having resigned from the Association were no longer eligible to membership under the By-law which requires continued membership in the state association, and that these were allowed to resign in preference to being entered as dropped, while many more resigned on account of age. This has been referred to year by year in the reports of the secretary and of the trustees.

For several years efforts to have those who were taking THE JOURNAL as subscribers and who were eligible to membership in the Association to transfer their names from the subscription list to the membership roll, have not been made because of the uncertainty of the final ruling of the Post-Office Department regarding the mailing of THE JOURNAL to such members. As noted in the report of the Board of Trustees, this matter has now been adjusted. The increase of membership that really counts is the increase in the membership of the organization; that is, in the county societies. —Secretary.]

Number of members May 1, 1909			33,935
Died	289		
Resigned	1,937		
Not eligible	625		
Non-payment	406		
Not found	95		
Total	3,352		
Added by subscription		3,593	
Transferred		2,628	
New members		965	
A net gain of			241
Or a total membership of			34,176

Number of members May 1, 1910			34,176
Died	335		
Resigned	222		
Not eligible	462		
Non-payment	1,849		
Not found	48		
Total	2,916		
New members added		2,700	
Transferred from sub. list		2,294	
A net loss of			216
Or a total membership of			33,960

The number of members May 1, 1911, was 33,960; 299 members have died; 1,301 members have resigned; 500 members have been dropped as non-eligible, and 1,987 have been dropped for non-payment of dues, and 64 reported not found, making a total of 3,151 names to be deducted from the membership list. There have been added 3,474 to the membership roll, of which 2,253 were transferred from the subscription list. The membership of the American Medical Association May 1, 1912, is 34,283. There have resigned from the Association in the past four years 4,899; there have been dropped for the non-payment of dues 2,726, making a total of 7,635 members taken out of the Association. Why? This means an annual loss to the Association in dues alone of $38,175 and a still greater loss in prestige and education. No business house would permit such a loss of patronage without the closest scrutiny and the most careful analysis. Again, we have in the United States practically 102,000 medical men, with only 34,000 of these in the American Medical Association. Some states are thoroughly organized having as high as 66 per cent. of the physicians in the state as members of the American Medical Association, as North Dakota; while others have as low as 22 per cent.—Tennessee. It appears to me it is the obligation of this Association to determine why the state of North Dakota has not 80 or 85 per cent. and the state of Tennessee an equally high percentage. Are we doing a sufficient amount of work for the every-day practitioner to keep him interested? Are we giving him sufficient for the $5 which he pays for his membership and THE JOURNAL? Or, what in addition must we do to keep alive the interest in the Association and to obtain his support and membership? All these questions should be worked out by a body of men who have special ability and facilities to determine the cause and remedy the evil effects of this diminution in membership. It will be said that we have taken in more than we can assimilate. That is not a rational explanation. It will be said that we have taken in a large number of members who were undesirable. That I do not believe is true. The fact, as it appears to me, is that we have a colossal number of desirable members of the profession outside of the organization who are not reaping the benefits in the way of education and stimulation to higher work which they should receive from this Association. I therefore recommend that organization be taken out of the work of the Council on Health and Public Instruction, as it is an entirely independent function, and that it be placed under a Council on Organization, to be elected by the House of Delegates, to consist of five members, one of whom shall be elected for a period of five years, one for four years, one for three years, one for two years, and one for one year and one each succeeding year for five years.

This work must be advanced but it cannot be done through literature. It must be advanced by direct contact with the medical profession in the various localities, in state and county societies. I would suggest that the delegates also read Dr. Littig's article in THE JOURNAL, June 1, p. 1653.

It is very much to be regretted that Dr. J. N. McCormack has severed his connection with the organization activities of the Association. The American Medical Association owes him a great debt of gratitude for the splendid service which he carried on for so many years in increasing its enrolment. The results which he achieved could be obtained only by a man with a born conviction in the ideals which he advocated, with the charm and force of character which carried conviction to those who listened to or came in touch with him. He had a better knowledge and a better control of the agencies which induced men to become members of the Association than any man connected with it since its organization. I had hoped that the House of Delegates might prevail on him to continue his activities, even in a less laborious manner. He has made many sacrifices of personal comfort and financial loss to further the interests of this body. His was truly an altruistic labor. It is this type of devotion, however, that is necessary to maintain and increase our membership. Organization must receive special forceful and continued effort in order that the best results may be obtained. The statement that the organization has taken in more members than it can assimilate is not in consonance with the facts if the great interests of the general practitioner are to dominate the American Medical Association, and these interests by the force of number and by the degree of their utility should dominate every act of this organization.

THE SECRETARY

I wish personally to thank the Secretary, Dr. Alexander R. Craig, for his effective and ever ready assistance and advice during my administration.

THE JOURNAL

The splendid journal which the American Medical Association is publishing is a monument to its scientific work, a stimulus of enthusiasm, a beacon of integrity in the diffusion of medical knowledge and in the standardization of journal ethics. Great credit is due to the editor, Dr. Simmons, for these results. It is his desire to increase the scope and enhance the service of this journal to the medical profession. This organization is now on a firm financial basis. It has a goodly surplus and an increasing revenue. This surplus should not be hoarded, but should be annually expended for the education of the great body of practitioners of the organization. THE JOURNAL is essentially the sole modern library of many thousands of practitioners, both at the cross-roads and in the side-streets. Indeed, it is the only journal of moment which many practitioners take. It should therefore bring to these men the greatest possible amount of available information. It is objected that it is too large now for the busy practitioner to read in a single week. That may be true of some, but not of many. It should have in it the maximum amount of information available and well indexed for the practitioner to refer to when a particular case comes under his charge, and when he looks to THE JOURNAL it should not be found wanting. THE JOURNAL has now on an average of 54½ pages of advertisements, and 64 pages of reading matter. We do not need to increase the advertisements, but an addition of 50 or 100 per cent. to the reading-matter can be made at no great expense in publication, and we have the money to do it. There are more than enough good articles sent to THE JOURNAL and rejected than would fill this additional space. We have been setting up standards, through editorials and articles, as to the type of journal in which physicians should publish their articles. If we are to be practically true to this standard, let us provide for them a place of publication for these articles in a journal that is above reproach and has a large circulation. Again, it appears to me, it would be profitable to publish more of the communications from the state and county societies, both of inquiry and of suggestion. From the number of letters which I receive annually, asking where information concerning topics can be found, and what can be done for certain cases, it seems to me that greater space can be given to inquiry, and in this way stimulate its frequency and enhance its usefulness. In other words, we should have a bureau of inquiry and information. Whether the additional material should appear as a monthly or bimonthly supplement, or as a regular weekly edition in the way of pages, is a question for the General Manager and Editor, but the increase should be ordered by the House of Delegates.

COMMITTEE ON NOMENCLATURE AND CLASSIFICATION

This committee, through the zeal and labor of its chairman, Dr. Cressy L. Wilbur, has accomplished a great deal in the past six months, as the chairman has only been in this position since Dec. 7, 1911. In that short space of time it has been demonstrated how much can be accomplished by a committee when its chairman and some of its members are alive to the work. A report will be submitted to you to-day which is scientific, comprehensive and inspiring. I sincerely hope that the House of Delegates will encourage the continuation of the work as it is of major importance in the standardization and general advancement of medical education and information. One of the dominant ideas in all branches of science in the last two decades is precision—precision of thought, precision of deduc-

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tion, precision of investigation and precision of nomenclature, I regret to say that precision has not been dominant in medical writing, medical instruction, in medical practice, either in diagnosis or treatment. Individualization must support precision in our work. This committee should be made a permanent one, and I trust may be continued under its present chairman.

COUNCIL ON MEDICAL EDUCATION

Under the able chairmanship of Dr. Arthur Dean Bevan, this Council has continued the great work and its former activity, and it has annually added to its credit-rôle of achievement in elevating and standardizing American medical colleges. It seems to me a fitting time for this Council through this body to take some action in recognition of the foundation of the first medical college in America, 1765, by Dr. John Morgan, of Philadelphia, and I submit a letter which I received from Dr. Edgar Fahs Smith, provost of the University of Pennsylvania, to the House of Delegates and through it to the Council on Medical Education. This Council should receive full encouragement that it may continue the great and splendid work of its former years.

COMMITTEE ON ANESTHETICS

The House of Delegates should encourage the work of this Committee. There was no appropriation made for its special work last year. Dr. Yandell Henderson, of Yale, incurred some expense during this time, and I feel that he should be reimbursed and the Committee's work continued.

JUDICIAL COUNCIL

This Council has worked arduously in the preparation of the skeleton report in connection with the Principles of Medical Ethics. We feel that this is the most important matter for the House of Delegates at this session, and should receive the most careful and studied attention. I will call especial attention to Section VI, Article 4. I feel that it is not sufficiently comprehensive and does not definitely condemn and penalize a practice that is outrageously too prevalent. I feel that the parasitic practices that have been and are in vogue should be called by their proper names and printed in letters of burning condemnation so that he who runs may read, and that the guilty may be easily recognized and properly sequestrated from the great mass of honest, conscientious and supremely trustworthy medical men who are leading exemplary lives and practicing medicine according to the highest ideals of our profession, and who should not have their good names and their good work tarnished by a questionable few.

I submit the following as a tentative substitute, prepared by Dr. John B. Roberts, of Philadelphia:

Strike out Section 4, Article 6, on relation of physicians to their patients, and insert:

"No honorable or self-respecting physician will offer or give to another physician, surgeon or specialist a portion of the fee, paid by a patient for his professional services in a medical or surgical consultation or operation, as a commission or reward for bringing or referring the patient to the consultant; and no honorable or self-respecting physician or surgeon, who desires the professional opinion of another physician or surgeon as an aid in the treatment of a patient under his control, will accept a division or splitting of the fees in any direct or indirect manner, unless the patient or his next friend is fully aware of, and intelligently understands the details of, the transaction. Otherwise this division or splitting of medical fees is an intolerable betrayal of the patient's confidence."

THE COMMITTEE ON CLINIC DAYS

This committee has encountered many difficulties, but finally overcame them in arranging for the clinic days. Atlantic City is the least available in this particular line. In other cities clinic days can be made quite an attractive feature of the annual session, and, I believe, will double the attendance at the annual sessions. The nineteenth century was the reading and contemplating period, the twentieth century is the seeing, hearing, doing, demonstrating period, and the testing of all things by personal observation, and unless this organization is in pulsation with these world movements, it will soon cease to be the great potential force for medical advancement that its opportunities afford. Unless clinics are made a part of the annual program, inside of three years the attendance at the Clinical Congress of Surgeons will exceed the attendance at the annual meetings of the American Medical Association. Any one who has attended the meetings of the clinical congress cannot help but realize the enormous enthusiasm and interest which they created. All modern education employs the laboratory, the work-shop, the training-school, and the application plan and medical education should be of the experimental or hospital type more and more. This Association should not be obsolete in its methods of disseminating knowledge. The empty, and too frequently stereotyped papers on medical topics do not educate, inspire and arouse enthusiasm as the actual demonstration does. Even if they are good, they are robbed of their force by cutting down the time for presenting the subjects to fifteen minutes. It is a counterfeit method of education, and the earlier the Association ceases to pass counterfeits, the sooner it will be placed on a substantial, legal-tender basis of present-day pedagogy. We want more subjects on modern lines by modern writing and thinking men.

I would suggest that this committee be made a permanent one, and feel that if Monday, Friday and Saturday of the annual session week are appropriated for clinics, it will bring the members to the meeting in time and retain them to the end of the session, and the clinics will receive the heartiest support of the profession.

HOUSE OF DELEGATES

In an organization of the magnitude of the American Medical Association, the selection of its officers, trustees, councils and committee members is most important in order that it may not tend to bureaucracy or autocracy. It is important in every great organization that rotation in positions of power and trust take place, otherwise in time, regardless of the efforts that may be made to the contrary, personal interests or idiosyncracies, likes and dislikes, will dominate its management, which must of necessity be to the detriment of the whole. This rotation in position should be automatic, in order that it may be entirely impersonal and democratic. This House, representing in a small body the larger interests of the medical profession, should not delegate its prerogatives or responsibilities without a most careful analysis of the work of the smaller number during the interim when the House is not in session. They should annually check up the instructions which were given to the Board of Trustees, councils and committees, and ascertain if these were carried out to the letter and in the spirit of the House. The House of Delegates should and must remain in absolute control of every interest of this Association and see to it that no individual or combination of individuals or council or the Board of Trustees can thwart its will, divert its force, ignore its instructions or assume ownership of it. It has been and must remain the sovereign power.

I would suggest, as an amendment to the By-Laws, that the President, the Secretary, and the Editor and General Manager, be made ex-officio members of the Board of Trustees without voting power, that the Secretary of the Association be made secretary and custodian of the transactions of the Board of Trustees, that accurate minutes should be kept of all its proceedings, financial and otherwise, and that he be prepared at the annual meeting to give the details of any of these transactions to the House of Delegates—the sovereign body.

Gentlemen, I thank you for your courteous attention.

Second Meeting—Monday Afternoon, June 3

The House of Delegates reconvened at 2:15 p. m., and was called to order by the President.

Report of the Committee on Memorial to Medical Officers Who Died in the Civil War

Colonel William C. Gorgas, Canal Zone, Chairman, read the report of the Committee on Memorial to Medical Officers Who Died in the Civil War, as follows:

To the Members of the House of Delegates of the American Medical Association:

At the sixty-second annual session of the Association held at Los Angeles, June, 1911, this Committee reported progress and was continued.

The formation of the General Committee of one surgeon from each state has been found almost impracticable on account of the death of many surgeons. Only three states, thus far, have responded; namely, Dr. H. O. Marcy, of Boston, Mass.; Dr. J. M. Keller, of Hot Springs, Ark., and Dr. D. J. Roberts, of Nashville, Tenn. These have been elected to membership on the Committee. Without regard to service in either army, your Central Committee proposes this year to select suitable members by which they will be enabled to complete the General Committee.

Through the courtesy of the Surgeons-General of the Army and Navy, a list of those surgeons who lost their lives in the Civil War is being compiled for future use that may be decided upon by your Central Committee. Already, it has

been ascertained by our colleague, Dr. S. Weir Mitchell, that in the Union Army, fifty-one surgeons were killed, eighty-three seriously wounded, and that two hundred and eighty-three died from wounds or disease contracted during the Civil War. The available records of the Confederate Army are few, but the President of the Association of the Medical Officers of the Army and Navy of the Confederacy is at work and has already sent in several names to your committee. When these authentic statistics shall have been completed, they will be a satisfactory source of information for the future historian of our too meager records of the voluntary sacrifices made by our dead comrades, and he will be thankful for the collaboration by Federal and Confederate survivors of the War of 1861-65—to those who have thus joined hands in perpetuating the memory of valorous deeds and patriotic services, in which all true and broad Americans have an equal pride.

As soon as the General Committee is completed and the opportunity supervenes, your Committee desires, in each state, to begin aggressive operations on the lines of the proposition announced in a previous report and already endorsed by this House.

All the expense incurred in the work thus far has been paid by the Committee; however, they recommend that it be continued with the same privileges, instructions and appropriation authorized by the House at the Atlantic City meeting in 1909. Respectfully submitted,

WILLIAM C. GORGAS, Chairman.
S. WEIR MITCHELL,
G. LANE TANEYHILL, Secretary.
W. W. KEEN,
G. B. THORNTON.

On motion of Dr. Arthur T. McCormack, Kentucky, the report was adopted by a rising vote.

Report of the Committee to Advise with the National Red Cross

Dr. A. T. McCormack, Kentucky, Chairman, read the report of the Committee to Advise with the National Red Cross, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your Committee to Advise with the National Red Cross has the honor of reporting that through its Chairman, three conferences have been held with the officers of that organization—one in New York and two in Washington.

It is a pleasure to testify to the grasp, efficiency and usefulness of the heads of our Red Cross, and to pay a special tribute to its presiding genius, Miss Mabel Boardman.

The first problems presented by the Red Cross to your Committee were, "How may we organize an effective medical force throughout the country which may be available without delay in case of a local disaster?" "When medical services are volunteered to the Red Cross, how may it determine the reputability and competency of the volunteer?"

The opportunity offered to our profession for life-saving work of the highest character seems manifest. If in times of great disaster a wise executive committee of the Red Cross right on the spot is already empowered to act and then report to the general officers at Washington, its work will be far more effective than the present somewhat haphazard method of organization following newspaper or other more or less roundabout notification. The good work of the Red Cross under this system has been due to the genius and initiative of its general officers and it is their desire to diffuse the responsibilities as well as the opportunities for good into a great organization actually national that will reach into every nook and corner of the country where disaster may come of such character that it demands more than local assistance. A disaster involving a remote mine in Tennessee or the Dakotas, a railroad wreck in Arizona, a schoolhouse fire in Ohio, a factory holocaust in New York, or a flood in Kansas or Arkansas should have in its own vicinity an organized force ready to spring into active operation instantly and take the initiative in relief work, which is frequently the most important part of the whole Red Cross campaign.

Your Committee therefore recommends: (1) that a standing committee of three on Red Cross medical work be constituted by an amendment to our By-Laws, one of whose members shall be appointed by the President on the nomination of the Surgeon-General of the Army, and one on the nomination of the Surgeon-General of the Navy; that the third member of the committee, who shall be its chairman, shall be appointed by the President of the Association and nominated to the Red Cross as the representative of this Association on its Relief Board; (2) that the necessary expenses of this Committee, not to exceed $500 annually, be paid by the Board of Trustees; (3) that this Committee shall have advisory supervision over state and county committees and shall be empowered to act for the Association in matters involving medical personnel in times of disaster, provided that it shall not be authorized to involve the credit of the Association without the express authority of the House of Delegates; (4) that this Association recommend to its constituent associations that they constitute similar committees of which the State Secretary shall be Chairman; and a county committee for each component society of which the District Councilor and the County Secretary shall be ex-officio members; (5) that such state and county committees shall have similar duties to the national committee in their respective jurisdictions, and shall be authorized to cooperate with the lay, nurses, finance and other committees of the National Red Cross in carrying out their functions.

It will, we feel sure, be readily seen that such a vast organization as is contemplated in this report, involving the formation of thousands of locals all over the country by the National Red Cross, will, if successful, be forced to do something to keep its hand in, so to speak, and your Committee has suggested the possibility of such an organization of existing hospitals and nurses' training schools and other public health forces as will best train them as agencies for the protection of life in times of war or national disaster while they are actually responding to the constant calls of the tens of thousands of unnecessary and preventable deaths in the country each year from preventable diseases, from faulty sanitary and housing conditions, from industrial and other violence. This would involve the formation of a central organization supervising training-schools for nurses with similar functions and powers of moral suasion as our Council on Medical Education. It would involve, eventually, at any rate, the coordination of all those forces working publicly for the prevention and cure of ill health and resulting loss of life. It would involve, in due course of time, such local cooperation with the local authorities and the people as would lead to the establishment in all centers of population, at least in all county seats, of hospitals, whose function would not be merely the cure of disease but which would be real centers from which should emanate everything which could help the people of that community toward right living.

Gentlemen, this may seem idealistic. No ideal can be too high either for the American Medical Association or the National Red Cross which can work to the welfare, health and happiness of the American people in peace or in war. It will involve hard, prolonged work, but the results to be accomplished are so vast that it must be worth while, and American medicine has accomplished too much to turn from any opportunity to do more. Until the profession and people of the United States have at least made its cities and its rural communities as healthy as Colonel Gorgas and his associates have done in pestridden Panama, we have an opportunity which we may not neglect.

Respectfully submitted,

A. T. MCCORMACK, Chairman.
CHARLES A. L. REED,
MILES F. PORTER.

This report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

The minutes of the previous meeting were read and approved.

Reference Committee Changed

In the absence of Dr. Joseph Becton, Texas, President Murphy appointed Dr. William B. Russ, San Antonio, to take the place of Dr. Becton on the Reference Committee on Amendments to the Constitution and By-Laws. In place of Dr. J. N. Jenne, Vermont, he appointed S. G. Kahn, Salt Lake City, Utah.

In the absence of Dr. A. C. Scott, Texas, he appointed Dr. J. W. Fleming, Brooklyn, N. Y., on the Reference Committee on Miscellaneous Business, as Chairman.

Dr. D. Chester Brown, Connecticut, Chairman, presented a supplementary report for the Committee on Credentials, reporting an additional registration of twenty delegates.

The Secretary called the roll, recording as present sixty-four members.

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Report of the Committee on Nomenclature and Classification of Diseases

Dr. Cressy L. Wilbur, Chairman, read the report of the Committee on Nomenclature and Classification of Diseases, as follows:

To the Members of the House of Delegates of the American Medical Association:

The present Chairman of the Committee on the Nomenclature and Classification of Diseases was appointed on Dec. 7, 1911, *vice* Dr. Alexander Duane, resigned. Doctor Duane was long associated with the work of the Committee under the chairmanship of Doctor Foster and the Committee desires to express its high sense of appreciation for his continued interest in the work and for valuable assistance since his resignation.

During the past year your Committee has suffered a severe loss in the death of Dr. Frank P. Foster, its first Chairman. From the time of his appointment until his death Doctor Foster labored assiduously on the task assigned to him, for which, indeed, he was eminently fitted by training and temperament. To a scholarly nature and sound judgment he added a broad culture, a profound knowledge, based on great lexicographic experience, of the meaning and derivation of words, and a long and intimate acquaintance with the periodical literature of medicine. These qualifications made him a most excellent arbiter on all questions of nomenclature. To the subject of classification, with its involved problems and its various conflicting systems, he gave close and conscientious study, calling in whenever necessary the aid of specialists, whose contributions, carefully digested and combined with his own researches, he summarized in the reports presented to the Association in 1908 and the following years. It must be added, as showing the nature of the man, that during all this time, while pursuing the work with characteristic industry, accuracy and faithfulness, he was already in the grip of the disease from which he finally succumbed. Yet he kept faithfully on, laboring to the very last and bearing his affliction with uncomplaining cheerfulness and unvarying fortitude. Your Committee feels that it cannot let this occasion pass without testifying to its admiration for Doctor Foster's high character, varied attainments and great ability, its appreciation of his uniform fair-mindedness, courtesy and tact, and its gratitude for his self-sacrificing labor and unselfish devotion.

The work of this Committee is on a subject of fundamental importance to medicine. Its general purpose and scope may be learned from a statement entitled "A Nomenclature of Diseases for the United States," published under the head of "Association News" in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, April 13, 1912, page 1134. Its primary object is to provide a definite nomenclature or list of names of diseases and pathologic conditions so that physicians throughout the United States may have a guide in the selection of precise terms for clinical reports, hospital statistics, and general mortality and morbidity reports. "Among the great ends of such a uniform Nomenclature must be reckoned that of fixing definitely, for all places, the things about which medical observation is exercised, and of forming a steady basis upon which medical experience may be safely built."[1] The present condition is chaotic; a single disease may be represented by many names and a single name may be used for several diseases. A large number of unsatisfactory and indefinite terms, which reflect discredit upon a scientific profession and vitiate all medical statistics, are in common use.

The Reference Committee on Hygiene and Public Health recommended at Los Angeles last year, and the recommendation was approved by the House of Delegates, that—

"The Committee on Nomenclature and Classification of Diseases . . . be instructed to continue its work in cooperation with other organizations working along the same lines, and that such classification as they may adopt, together with the International Classification of Causes of Death, be published and supplied to the members of the American Medical Association."

The first purpose of the Committee, therefore, was the preparation of a practical Nomenclature of Diseases that could be "published and supplied to the members of the American Medical Association," and the Committee is happy to report that the copy for such a publication has been prepared and will be ready for printing as soon as the final details, which will be adjusted at the sessions of the Committee at Atlantic City during the present meeting of the Association, are incorporated and an index completed. The Committee accordingly requests that the publication of same be authorized

In preparing this Nomenclature, the Committee recognized the recommendation that was included in Doctor Foster's report as adopted by the House of Delegates last year to the effect that the Bellevue Hospital Nomenclature of Diseases and Conditions, the last edition of which contains an arrangement of terms in the order of the International List, should "be made a part of whatever publication on the subject of the nomenclature and classification of diseases the American Medical Association may decide to issue—and the prominent part, by reason of its clinical character," and took this Nomenclature as the basis of its work. The Committee desires to express its thanks to the Committee on Clinical Records and to the Board of Trustees of Bellevue and Allied Hospitals for kindly placing at its disposal a considerable number of copies of the Nomenclature for the use of members and collaborators and recommends that a formal resolution of appreciation be extended by the Association.

From the short time available it was necessary to organize the work rapidly and to complete each part of it by a prescribed time. This could not have been done if the matter had not been studied previously and the fact recognized that the Bellevue Nomenclature in its present form had proved most useful and acceptable in the practical clinical work of many hospitals, as well as being in close accordance with the Manual of Nomenclature of the Army Medical Department. A list of collaborators was therefore prepared, including the Chairman of each Section of the Association, and letters requesting cooperation were mailed on February 1; replies were received, classified, and submitted to the members of the Committee (up to April 15); and the Committee is now engaged at the time of the submission of this report (April 20) in considering the recommendations and will conclude its work, in regard to any details that can not be settled by correspondence, by meetings held during or just prior to the sessions of the Association at Atlantic City, June 4-7, 1912. Cordial thanks are due to those who have contributed suggestions, in some cases amounting to detailed classifications of special groups of affections, and to Surgeon General Torney of the Medical Department of the Army and Surgeon General Stokes of the Bureau of Medicine and Surgery of the Navy for hearty support. All the differences in the Army Nomenclature, the Philippine Nomenclature, the Navy List, etc., together with the suggestions from individual collaborators, have been considered, the whole number of recommendations amounting to several thousand. It is believed that the result will be of practical value and constitute a beginning for more extended work on the subject.

In this connection it may be mentioned that overtures have been made for possible cooperation with the Committee of the Royal College of Physicians of London that will soon be constituted, in all probability, to arrange for the fourth decennial revision or fifth edition of the Nomenclature that has been the authority in England and all the British possessions for the past forty years. England has recently adopted the International List of Causes of Death and the Registrar-General has published a Manual similar to the corresponding Manual published by the U. S. Bureau of the Census, so that all mortality statistics will now be compiled on an identical basis by all English-speaking countries. It is hoped that this Association may cooperate with the London College in preparing a Nomenclature of Diseases that will be of equally world-wide use, with equivalents in Latin, German, French, and Spanish for the English terms, and that valuable suggestions may result therefrom for the Third Decennial Revision of the International List of Causes of Sickness and Death. Thus will be brought about that harmony between the statistical lists employed for the tabulation of statistics of sickness and mortality in hospitals, in the Government medical services, and in the general population, with the underlying basis of a thoroughly scientific and comparable nomenclature of diseases and conditions for the general use of the profession, that it was the great purpose of the American Medical Association to assist.

Respectfully submitted,

CRESSY L. WILBUR, *Chairman.*

April 20, 1912.

On motion, the report was referred to the Reference Committee on Miscellaneous Business.

1. Preface Nomenclature of the Royal College of Physicians of London, first edition.

Report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal

Dr. A. L. Brittin, Illinois, presented the report of the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal, as follows:

To the Members of the House of Delegates of the American Medical Association:

I have the honor to report for the Committee to Consider the Mode of Commemorating the Completion of the Panama Canal as follows:

In due season a communication was addressed to each of the members of the Committee, requesting suggestions for a report to the American Medical Association meeting in June. The replies were received from all of the members of this Committee with the exception of Dr. Amos Graves, of San Antonio, Texas, who was reported as having died in the month of January.

The digest of the suggestions of each member of the Committee, together with the Chairman's idea of a report, was sent to each of the members of the Committee for their approval, correction or amendment.

This synopsis follows:

REPORT PROPOSED BY CHAIRMAN FOR SUBMISSION TO THE HOUSE OF DELEGATES AT THE 1912 MEETING OF THE AMERICAN MEDICAL ASSOCIATION

A Congress on Tropical Medicine and Hygiene should be held just before or just after the meeting of the American Medical Association in 1915. This congress should, by preference, be held in San Francisco and under the auspices of the American Medical Association and the authorities of the San Francisco Panama Exposition.

If the 1915 meeting of the American Medical Association is not held in San Francisco, the congress should be held at the place of meeting of the American Medical Association in that year and the congress should be held under the auspices of the American Medical Association.

1. Such a congress should receive the official commendation and support of the United States government by congressional act authorizing the cooperation of the Services of the Army and Navy and the U. S. P. H. and M.-H. S. Such congressional authorization would not only dignify the congress, but would fulfil the purpose of authorizing a proper cooperation with the service schools, bureaus and other institutions interested in advancing the knowledge of tropical medicine and hygiene. Governmental recognition would also permit the proper invitation of delegates from foreign countries.

2. Such a congress should be organized by a committee made up of representatives from the American Medical Association, the Government Medical Services of the United States embraced in the Army, Navy and P. H. and M.-H. S., together with representatives of the boards of health of the various states and the bureaus or boards of health of the various territorial possessions of the United States.

Such an organization committee should include representatives from the leading institutions of learning and of research in the United States and of the territorial possessions especially interested in the objects of the congress, such as the societies of tropical medicine, institutes of research and medical colleges of standing.

Such an organization committee should be as large as possible, with the idea of creating widespread interest in the proposed congress and its purposes, and with a view of making the celebration as great as it should be.

The actual plans and other fulfilment should be undertaken by an executive committee derived from the general organization committee.

The selection and appointment of the organization committee should be made by the constituted officers of the American Medical Association, in conference with the constituted head officials of the government services and, if the meeting of the American Medical Association in 1915 is to take place in San Francisco, such appointments should be made with the cooperation and approval of the constituted authorities of the exposition.

3. Delegates to the congress should be invited from all foreign governments: from societies and other bodies interested in the subject of tropical medicine and hygiene, including schools devoted to the study of these, such as those of London, Liverpool, Paris, Hamburg, Rome, Lisbon, China, Australia, etc.; the schools of tropical medicine and hygiene related to the United States and its possessions have been included by representation in the organization committee.

4. Plans for the congress should contemplate the arrangement of a program which should provide the discussion of topics of current interest in tropical medicine and hygiene. In addition, a systematic exhibition should be arranged and this should be representative of all parts of the world. One day of such a congress should be exclusively devoted to the chief object of the congress, viz., the celebration of the completion of the Panama canal.

The program for that day should include the demonstration of the achievements in sanitary science accomplished in the Canal Zone and such demonstration should also include the achievements of Americans in tropical medicine.

It would be timely and appropriate to arrange for a memorial exercise to Reed, Lazear, Carroll, Ricketts and others who have been martyrs to this particular field of preventive medicine.

5. The American Medical Association should memorialize Congress with a view to a permanent monument in recognition of the great and glorious work of Americans in sanitary science and preventive medicine. Such a monument might be constituted in the erection of a hospital for tropical diseases, to be located either within the confines of the United States or, more appropriately, in the Canal Zone itself, and the dedication of such an institute could be contemplated among the plans for the celebration in 1915.

6. The present Committee should be continued, or a like committee appointed, to expand the plans proposed by this Committee so as to permit their practical fulfilment, such plans to be submitted fully at the 1913 meeting of the American Medical Association.

As Chairman of the Committee I beg to submit the plan embodied in the Chairman's report to the members of the Committee which has been approved by the individual members of the Committee without correction, as the report of the committee to the House of Delegates.

Respectfully submitted,

ISADORE DYER, Chairman.

Dr. Hubert Work, Colorado, moved that this Committee be made a permanent one and its work continued until the completion of the canal in 1915.

Motion seconded and carried.

Miscellaneous Business

Dr. G. Lane Taneyhill, Maryland, under the head of "Miscellaneous Business," presented the following:

Memorial on Behalf of The Home for Widows and Orphans of Physicians Incorporated

The undersigned, representing the "Home for Widows and Orphans of Physicians, Incorporated," beg leave to present the following facts and proposal:

This institution is a "doctors" charity, located in the city of Baltimore and chartered under the laws of the state of Maryland. It is designed for the care and maintenance of destitute persons of the classes named in the title, and has no connection with any other corporation.

It originated in an experiment begun about ten years ago when our attention was drawn to the subject, from which we learned of many sad cases in which the wives and families of physicians have been left helpless and in want by the death of their natural protectors. We know of several suicides of doctors' widows, of one widow who was rendered insane by her misfortunes, of one aged widow who has been compelled to beg from door to door and of a number who have been saved from the poorhouse only by the pity of non-medical friends. The ordinary "homes" are closed to these people because they have no means to pay the large entrance fees.

It seems a great reflection on the medical profession that no provision of this sort has *ever* before been made by it for the care of these persons.

Moved by a knowledge of their needs and a warm sympathy for their sufferings, we have undertaken to provide a home for them in Baltimore. We take in, without fee of any kind, any such person representing a physician in good standing in any part of the country; in other words, the scope of our charity is *national*.

This being the case, it is our desire to unite in some way with your Association, only reserving on our part, the privilege of continuing to work for the charity under your direction and auspices. We are willing to turn over to you our large

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three and a half story brick building, 20 by 132 feet, located in the best residence section of Baltimore, and which we own in fee.

A delegation of our board has been appointed to attend the ensuing meeting of the Association at Atlantic City, and it will be glad to appear before you or any committee having such matters in charge and explain further our work.

Should the Association not be able for any reason or not desire to take up the work in the manner suggested, we request that you assist us by an annual appropriation of—say $1,500—for maintenance. We wish to place the charity on a permanent and safe footing, and appreciate the necessity of some financial provision of this sort. As yet we have no endowment fund and are dependent for the maintenance of the charity on the subscriptions and donations of the members of the medical profession and the proceeds of entertainments of various kinds which we get up from time to time.

We can refer to Dr. William H. Welch, who knows and approves of our project.

MRS. EUGENE F. CORDELL, President.
MRS. J. F. H. GORSUCH, Vice-President.
MRS. ANNA M. MCCANN, Rec. Secretary.
EUGENE F. CORDELL, M.D., Treasurer.
GENEVIEVE E. PERKINS, Pres. of Aux.
MRS. JOHN G. JEFFERS, Cor. Secretary.

On motion, duly seconded, the memorial was referred to the Committee on Establishment of Physicians' Sanitarium.

Dr. H. G. Wetherill, Colorado, the delegate from the Section on Obstetrics and Gynecology, presented the following resolution, which was referred to the Reference Committee on Amendments to the Constitution and By-Laws:

Resolved, That through the representative of this section we request the House of Delegates to make the following alteration in the By-Laws of the American Medical Association: Amend Chapter XI, Section 1, Heading 3, to read as follows: "Obstetrics, Gynecology and Abdominal Surgery."

Requests for New Sections

Dr. H. A. Royster, North Carolina, presented a communication asking for the establishment of a Section on Orthopedic Surgery, which was referred to the Reference Committee on Sections and Section Work.

Dr. A. T. Bristow, New York, moved that a committee be appointed by the President to communicate with the officers of the British Medical Association, with a view to finding out whether a joint meeting of the British Medical Association and the American Medical Association is desirable and possible in the future.

The chair referred the motion to the Reference Committee on Miscellaneous Business.

Dr. G. Wythe Cook, District of Columbia, presented a communication asking for the formation of a new Section on Physical Therapeutics, which was referred to the Reference Committee on Sections and Section Work.

In the absence of Dr. Granville MacGowan, California, President Murphy appointed Dr. K. A. J. MacKenzie, Oregon, on the Reference Committee on Sections and Section Work.

On motion the House took a recess of fifteen minutes.

Report of the Committee to Formulate Amendments to the Constitution and By-Laws to Extend Membership

When the House reassembled, Dr. D. S. Fairchild, Iowa, chairman, read the Report of the Committee to Formulate Amendments to the Constitution and By-Laws to Extend Membership, as follows:

To the Members of the House of Delegates of the American Medical Association:

This being regarded as an important matter, it was felt that sufficient time should be taken to digest carefully all the features of the subject and to report first to the A. M. A., after which, in accordance with the resolution creating the committee, to report back to the state medical associations. Then it could properly come before the A. M. A. for adoption. If any plan was adopted other than the one now in force, it must be: first, to extend membership to all members of the constituent medical associations so that every physician who became a member of his county and state organizations should automatically become a member of the A. M. A.; second, to increase the dues collected by the county societies so as to include in addition to the county and state dues, a sufficient sum of money to carry on the work of the A. M. A. A careful investigation showed at once that the second plan was impracticable; the opposition would be overwhelming. The first plan was the only one considered after we had made an extended inquiry. This plan, as already stated, is to include in the membership of the A. M. A. all members of the constituent state medical associations.

It became at once apparent that a non-paying membership was an anomaly we could find no precedent for, a condition which permitted one set of members to be taxed and another set to escape taxation and yet to enjoy the right to vote on important matters, as for instance the election of members to the House of Delegates of the A. M. A. The nearest approach to this condition was found when the matter was investigated from a legal point of view, as in the constitution of boards of directors of corporations where a member of such a board can serve and perform the duties incident to his position without owning stock in the corporation, provided the articles of incorporation specified the right to vote without owning stock. Applying this to the House of Delegates of state associations, it becomes clear that there is nothing inconsistent, illegal, or contrary to a recognized principle of business for a member having no financial interest in the property or business of the A. M. A. to vote on such matters as may be provided for in the by-laws of the Association, viz., members of the House of Delegates of said Association. This part of the question being disposed of, it only remains to consider how the money necessary to maintain the present work of the Association may be provided for from a membership essentially in the first instance without dues or fees. To meet the necessary large expenditure for the work of the Association, a member at his option may on application and the payment of $5.00 per annum become a contributing member or fellow of the Association and receive a card which will entitle him to active participation in the meetings of the Association, render him eligible to a place on the program and eligible to serve in the House of Delegates of the American Medical Association under the provisions of the by-laws of said Association, and to receive THE JOURNAL. It is provided for convenience that the members of the A. M. A. who derive their membership from the constituent associations shall be designated as members of the A. M. A. and that the said members may on application and payment of $5.00 become contributing members and shall be designated as fellows of the A. M. A.

In accordance with this plan section 2 of chapter I of the by-laws shall be changed to read as follows: "The American Medical Association shall consist of the membership of its state and territorial associations and the Association shall be divided into two branches, (a) business branch, (b) scientific branch." To further the interest of the scientific branch it is recommended that upon making application on suitable blanks and paying the sum of $5.00 a member of the American Medical Association may become a fellow of the American Medical Association, which shall carry with it the rights and privileges which are now accorded those at present known as members of the American Medical Association.

The adoption of the amendments to the constitution, offered by Dr. John B. Roberts, Pennsylvania, last year, will make the constitution harmonize with these suggested amendments to the by-laws. In other words, the amendments to the by-laws will correspond to the amended articles of the constitution.

BY-LAWS

Chapter I.—Membership

Section 1. Classes of Members.—There shall be four classes: members, fellows, associate fellows, and honorary fellows.

Section 2. The American Medical Association shall consist of the membership of its constituent state and territorial associations and the Association shall be divided into two branches, (a) business branch, (b) scientific branch.

Section 3. Fellows.—Any physician reported as a member in good standing of a constituent association by the secretary of that association, who on a prescribed form shall apply for fellowship and subscribe for THE JOURNAL, paying the annual dues for the current year, shall be a fellow.

Commissioned medical officers of the United States Army, United States Navy, and the United States Public Health and Marine-Hospital Service shall be fellows of this Association so long as they retain their connection with their respective

service; these fellows shall not be required to pay dues and shall not receive THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, except by personal subscription.

Section 4. Tenure of Fellowship.—Fellowship in this Association shall continue only so long as the individual is a member in good standing of the constituent association of the state in which he resides. When the Secretary shall be officially informed by the secretary of the constituent association of the state in which a fellow resides that the fellow is not in good standing, the Secretary shall remove the name of such fellow from the fellowship roll of the American Medical Association and shall notify the fellow of the action taken, together with the reason therefor.

Section 5. Effect on Fellowship of Removal to Another State.—A fellow who becomes a resident of another state, to retain his fellowship in the American Medical Association, must become a member in the constituent association of the state to which he has removed within one year following his change of residence.

Section 6. Delinquency.—Any fellow who, for one year, has failed to pay his annual dues, shall forfeit his fellowship thirty days after notice from the Secretary has been mailed to his last known address.

Section 7. Fellowship Restored.—Any former fellow who complies with section 3, chapter 1, shall be reinstated upon payment of his indebtedness, including his dues for the current year.

Section 8. Associate Fellows.—The following may be elected in accordance with section 4, chapter VI, to associate fellowship: physicians who are members of the chartered national medical societies of foreign countries adjacent to the United States; dentists holding the degree of D.D.S. who are members of state or local dental societies, and pharmacists who are active members of the American Pharmaceutical Association; and representative teachers, students of sciences allied to medicine, resident in the United States and not eligible to regular fellowship. Associate fellows shall enjoy the same privileges as regular fellows, and shall be subject to the same conditions.

Section 9. Honorary Fellows.—Physicians of foreign countries may be elected honorary fellows by the House of Delegates in accordance with section 4, chapter VI.

Section 10. Invited Guests.—Scientists who are not eligible to regular membership in their constituent state association may be invited by the general officers or by the officers of a section to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

Chapter II—Registration

None but fellows, associate fellows, honorary fellows and invited guests shall be allowed to register or take part at the scientific meetings of the Association.

No fellow shall be eligible to register at an annual session until he has paid all of his current indebtedness.

No fellow shall take part in the proceedings of the Association or of any of the sections until he has registered his name and address in the registration office.

A fellow on registering shall designate the section in which he wishes to be enrolled, but no fellow shall register in more than one section at any annual session.

BUSINESS AND LEGISLATION

Chapter III—Qualifications, Term, Apportionment, and Registration of Delegates.

Section 1. Delegates must have been Fellows of the American Medical Association Two Years.—No one shall serve as a member of the House of Delegates who has not been a fellow of the American Medical Association for at least the two years immediately preceding the meeting of the House of Delegates at which he is to serve. In determining the qualifications of members of the House of Delegates, membership in the Association at the time of the adoption of this By-Law shall be regarded as equivalent to Fellowship in the Association.

Respectfully submitted,

D. S. FAIRCHILD, Chairman.
JOHN W. YOUNG,
CHARLES S. SHELDON,
HORACE D. ARNOLD,
JERE L. CROOK,
W. W. GRANT,
M. L. HARRIS.

Report of the Committee on Scientific Exhibit

Dr. Frank B. Wynn, Indiana, chairman, presented the report of the Committee on Scientific Exhibit, as follows:

To the Members of the House of Delegates of the American Medical Association:

The first Scientific Exhibit of the Association was established under the presidency of Dr. W. W. Keen in this city in 1900, Atlantic City as the birthplace of the Scientific Exhibit suggests comparison of the first with the present exhibit. The maiden effort was as much to the credit of the Association in that day, as the present one is to the profession in 1912. To be sure, the present exhibit is larger and presents many finer points of excellence not seen in the earlier efforts. This, however, is only to be interpreted as part of the progress being made along all lines of the profession.

Noteworthy in the evolution of the exhibit have been: the vast improvement in the methods of preparing and presenting museum material; the development of serial exhibits in illumination of special phases of pathology; the growth of research exhibits showing in most convincing manner the work of original investigation; *x*-ray exhibits setting forth their great diagnostic value; and in the realm of disease prevention, those developing the cartoon, and seeking to standardize tuberculosis and other public health exhibits.

The present exhibit in point of size, scope and general excellence is perhaps superior to any previously held. It is not possible at this time to give a detailed description. In all about forty separate exhibits are presented. These may be summarized under the following general headings:

A. RESEARCH EXHIBITS

1. Experimental Nephritis.—Nature, cause and principles of relief in edema and nephritis. Martin H. Fisher, University of Cincinnati.

2. Specimens of experimental endocarditis, and a demonstration of the microscopic and cultural features of the organism so commonly found in chronic or subacute infectious endocarditis. Edward C. Rosenow, Chicago.

3. Experimental intestinal anastomosis. W. D. Gatch, Indiana University, School of Medicine.

4. Exhibit showing laboratory phases of syphilis; the different strains of spirochetes, infected rabbits and the luetin test. Hideyo Noguchi, Rockefeller Institute for Medical Research.

5. Blood-vessel suturing. J. Shelton Horsley, Richmond, Va.

B. GROSS AND MICROSCOPIC SPECIMENS IN SERIES

1. Heart series showing subacute bacterial endocarditis, with reference to healing and healed cases. E. Libman, Mt. Sinai Hospital, New York.

2. Series showing pathologic conditions of the prenatal and lying-in state. J. R. Losee, New York Lying-In Hospital.

3. Series illustrating the various pathologic conditions of the lungs. W. M. L. Coplin, Jefferson Medical College, Philadelphia.

4. Bone lesions of syphilis and traumatic lesions of bone. D. S. Lamb, Army Medical Museum, Washington, D. C.

5. Visceral lesion of syphilis—gross and microscopic demonstrations. W. H. Welch, Baltimore, and Joseph McFarland, Philadelphia.

6. Specimens illustrating animal pathology. United States Bureau of Animal Industry.

7. Microscopic series relating to malaria and amebic dysentery. Isthmian Canal Commission, Department of Sanitation, W. M. James, Ancon, Canal Zone.

8. A series of 1,100 cystic calculi obtained in the Canton Missionary Hospital. John M. Swan.

C. PHOTOGRAPHIC AND PHOTOMICROGRAPHIC EXHIBITS

1. Photographic enlargements showing carcinoma of the uterus and injected vessels. J. A. Sampson, Albany.

2. (a) Trypanosomes as tissue parasites. (b) Tropical phagedenic ulcer. S. B. Wolbach, Harvard University Medical School.

3. Photomicrographs showing pathologic histology of heart, kidney and blood-vessels. Frank B. Mallory, Harvard University Medical School.

4. Tumors in fish. Harvey R. Gaylord, Buffalo, N. Y., New York Institute for Study of Malignant Disease.

5. Photographs illustrating chloroma. Walter L. Bierring, Des Moines, Iowa.

6. Series illustrating cutaneous syphilis. H. W. Stelwagon, Philadelphia, Pa.

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7. Series of photomierographic enlargements showing (a) Diverticulitis of the sigmoid. (b) Pathology of the prostate. (c) Gastric contents. Mayo Clinic, by Louis B. Wilson and Frank Smithies, Rochester, Minn.

D. GROSS ANATOMIC SERIES

Specimens injected by the Souchon method. Edmond Souchon, Tulane University, New Orleans, La.

E. X-RAY DIAGNOSIS

1. (a) Surgical lesions demonstrated by colloidal injection of the kidney, pelvis and ureter. (b) Lane splints and transplantation of bone. (c) Esophageal lesions. (d) Gastro-intestinal conditions. (e) Stereoscopic plates of tuberculosis. (f) Intrathoracic thyroid. Mayo Clinic, by J. H. Selby.

2. Stereoscopic reductions of pulmonary conditions. Kenon Dunham, Cincinnati, Ohio.

3. Showing fetal development of osseous system. New York Lying-In Hospital, by E. D. Truesdell.

4. Very complete series of plates illustrating the scope and achievements of Roentgenology in diagnosis and treatment. These were contributed by the following gentlemen: Drs. Emil G. Beck and W. A. Pusey, Chicago; Drs. L. G. Cole, Arthur Holding, Leopold Jackes and S. Tousey, New York City; Dr. A. W. George, Boston, and Dr. J. H. Selby, Rochester, Minn., and the following members of the American Medical Association and the Philadelphia Roentgen Society: Dr. E. W. Caldwell, New York City; Dr. H. Thelkeid-Edwards Smith, Bethlehem, Pa., and Drs. C. L. Leonard, W. T. Manges, W. S. Necomet, H. K. Pancoast, G. E. Pfahler and T. S. Stewart, Philadelphia.

F. PUBLIC HEALTH EXHIBITS

1. Miscellaneous exhibits relating to various public-health problems. Public Health and Marine-Hospital Service.

2. Cartoon exhibit, consisting of about 100 cartoons dealing with the following public-health problems: (a) Public water- and milk-supply. (b) The health of the people *vs.* the health of domestic animals, trees, plants, grain, etc. (c) Quackery and the patent-medicine business.

3. Demonstration relating to the venereal peril consisting of a large number of lantern slides, kinemacolor, moving pictures, motion pictures of the *Spirochæta pallida*, of the ameboid movement of white corpuscles, etc. By National Cash Register Company, Dayton, Ohio.

4. Photographic enlargements and charts by the American Association for the conservation of vision. F. Park Lewis and Douglas C. McMurtrie.

5. Patent-medicine frauds. United States Bureau of Chemistry, by R. E. Doolittle.

6. Illustrating by exhibits the teaching of oral hygiene in the public schools. By O. B. Nesbitt, Valparaiso, Ind.

G. HOSPITAL EXHIBITS

1. Sheppard and Enoch Pratt Hospital. In illustration of handicraft class for patients and occupation course for nurses. By William R. Dundon.

2. Massachusetts General Hospital. Apparatus, photographs and devices.

3. Highland Hospital, Fall River, Mass. Picture, floor plans, trays and devices.

4. Harriet Lane Home for Invalid Children, Baltimore, Md. Plans and drawings.

5. New York Hospital. Plans.

6. Michael Reese Hospital, Chicago, Ill. Infant's bed.

7. Department of Health, New York City. Blank forms used in hospitals.

H. MISCELLANEOUS EXHIBITS

1. Charts and propaganda of the American Medical Association relating to the prescribing of proprietaries.

2. Historical collection of stethoscopes. U. S. Army Medical Museum, by D. S. Lamb.

A committee on awards should be appointed by the President at once. They should arrange to meet all exhibitors at 10 a. m., Wednesday. A separate committee should be appointed on awards for the cartoon contest. The usual appropriation of $1,000 is recommended by the committee for the promotion of the work of the exhibit and its maintenance.

In conclusion, a few comments and suggestions are permissible concerning the future conduct of the exhibit. Certainly it will not be denied by anyone that the Scientific Exhibit has abundantly justified its existence. It is well to keep always in mind that this important phase of the Association work would be impossible were there not many men who love the science of medicine for its own sake, who are willing year after year in their strivings after scientific ideals, to give lavishly of their time, and often of their money, to aid this feature of the Association work. Under the generalship of the committee they have been the army which has made possible the prosecution of successful campaigns. Certainly the sentiment of this body is not misinterpreted in saying that you believe these men should be aided and encouraged in every possible way.

In the judgment of the committee nothing would contribute so much toward this end as a certain, fixed policy with reference to the location of the Scientific Exhibit.

First, it should be located at Registration Headquarters because it is, or should be, of interest to every member and therefore in a position of easy access.

Second, it should have commodious and well-ordered space immediately adjacent to the Registration Bureau. Let the first view which meets the eyes of the registering member be a splendid Scientific Exhibit before him and all about him. It should make the profound impression on him that this is what the American Medical Association stands for, and not commercialism. Why should we hesitate about a matter of this kind? Is it not simply keeping pace with the work of the Association in other directions; in advancing the standards of medical education, national health legislation and ethical prescribing? The fear that the Commercial Exhibit would suffer in patronage and therefore curtail material resources is not well grounded. On the contrary the Scientific Exhibit could be made a conspicuous and attractive avenue leading to the Commercial Exhibit. These views have the urgent endorsement of your committee, and would meet with grateful response from those who in times past have made possible the exhibit and on whom we must depend for its success in the future.

Finally the chairman offers his heartfelt thanks for the loyal support of his coworkers in the exhibit and of this honorable body. If the sentiments expressed seem to bear the mark of heat and criticism let me protest that they are merely the words of exhortation and earnest desire to be of service to this great and useful organization.

Respectfully submitted.

FRANK B. WYNN, Chairman.
W. M. L. COPLIN.
F. B. MALLORY.
F. ROBERT ZEIT.
LOUIS B. WILSON.
D. S. LAMB.

On motion, this report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Dr. Miles F. Porter, Indiana, moved that whoever has charge of the location of the exhibit, be instructed by the House of Delegates hereafter to give first choice of location to the Scientific Exhibit in the Exhibition Hall.

Motion seconded and carried.

The President appointed as the Committee on Awards for Scientific Exhibit Drs. E. J. McKnight, Connecticut; H. A. Royster, North Carolina, and Hugh T. Patrick, Illinois.

Report of the Committee to Arrange Appropriate Lectures to the Public at the Annual Meeting

Dr. William A. Evans, Illinois, Chairman, presented the report of the Committee to Arrange Appropriate Lectures to the Public at the Annual Meeting, as follows:

In January, 1912, your committee outlined a plan of education for the public along the following lines:

Two weeks before the meeting a New Jersey state-wide series of health lectures was to be inaugurated. The lectures were to be in public schools in connection with the exercises pertaining to the closing of the school year—in churches and in women's clubs.

The arrangements for these meetings, securing meeting-places and invitations to speak and furnishing speakers were placed in the hands of Dr. R. S. Morton and Dr. Mana Venton. They were to secure the cooperation of the services of the physicians of New Jersey, and particularly those working with the Committee for Public Health among women.

The Atlantic City program consisted of several features: one, the presentation of a health play; the second, moving-picture health films; the third, lectures in the churches and hotels. This part of the program was placed in charge of Dr. Guion of Atlantic City and Dr. Neff of Philadelphia. Soon after this committee began to make arrangements for meeting-places, and after it had begun negotiations for the health play, it

was apprised that the Council on Health and Public Instruction had appointed a special committee for the purpose of arranging for public lectures at Atlantic City. When this was brought to the attention of the chairman of your committee, he conferred with the President, and it was decided to allow the Council to proceed with its plans and to refer the matter to you for your decision. This year no harm was done, although some energy was wasted. We respectfully suggest that the House of Delegates settle the question of the right of the Council to assume functions which the House of Delegates had retained for itself.

EDWARD GUION,
W. A. EVANS.

On motion, this report was referred to the Reference Committee on Legislation and Political Action.

Report of the Committee to Investigate the Advisability of Publishing a Health Journal

Dr. William A. Evans, Illinois, Chairman, presented the report of the Committee to Investigate the Advisability of Publishing a Health Journal, as follows:

To the House of Delegates of the American Medical Association:

1. In our efforts to form definite conclusions on this important matter we have during the past year discussed the subject with many physicians; and we find that a large proportion of them feel that there is great need of, and a demand for, a health magazine for lay readers. They also express themselves as feeling that it is the duty of the American Medical Association to augment the excellent work that it is now accomplishing in educating the public on hygiene and medical matters, by undertaking the publication of a popular health magazine.

2. We believe that there is a demand on the part of the public for a health journal. The particular classes that would patronize such a journal are teachers, ministers and other professional men; those engaged in sociologic work of all kinds; and the intelligent men and women of all the walks of life. Physicians would also be interested in a health magazine, and they would aid in creating a greater demand by advising their patrons to read it.

The fact that all the popular magazines and the daily papers feature their articles on health matters shows that there is a demand on the part of the public for information on subjects pertaining to hygiene. We believe that the reading public will pay for such information in the shape of an illustrated attractive magazine, if published by and under the authority of the American Medical Association.

3. The features of the proposed journal that can be relied on to attract and hold the attention of lay readers are as follows: popular articles, as free as possible from technicalities, on such subjects as personal hygiene, including physical culture; school hygiene; industrial hygiene, with particular reference to occupational diseases, dietetics, including the selection and preparation of food, with infant-feeding as a special department; hygienic problems affecting life in the country, towns and cities; child labor, prison reform, eugenics and other sociologic subjects; medicolegal questions; public health laws; the customs and methods of living in foreign countries; patent-medicine frauds; sex problems and medical organization. There is no limit to the material on these and other subjects that would attract and hold the reading public, while at the same time educating all classes on the necessity for the passage and enforcement of the proper laws for the protection of the public from disease.

4. There are a number of physicians who have demonstrated their ability to write popular articles on medical subjects. The bulletins of various city and state boards of health publish many attractive and instructive papers for distribution to the public, and in that way many men are being trained in the preparation of popular medical literature.

Many physicians are capable of writing such articles, but have not done so for the reason that they have had no medium for their publication. They will not prepare them for publication in newspapers because of the fear of criticism by their professional brethren, but would be pleased at the opportunity of publishing such articles in a popular magazine of such high standards as are demanded by the American Medical Association.

5. The advertising in a health magazine should be of the same character as that of other popular monthlies, conforming, of course, to the present standard of advertising of THE JOURNAL of the American Medical Association. Such a journal would attract a large advertising patronage that would in a very few years make it a financial success.

While realizing the difficulties in making a success of a health journal for lay readers, your committee is of the opinion that it can be accomplished; if not by our organization, it surely will be by others who may not be in sympathy with our ideals. We believe that it offers a splendid field of usefulness for our great organization. We therefore recommend that the American Medical Association establish a popular-priced health journal that would reach and move the average doctor and appeal to the interest of the intelligent laity.

Respectfully submitted,

SEALE HARRIS.
E. FRONZAK.
B. R. MCCLELLAND.
W. A. EVANS, Chairman.

It was moved that the report be referred to the Board of Trustees.

Motion seconded and carried.

Maryland Asks for Public Health Journal

Dr. G. Lane Taneyhill, Maryland, supplemented the report of Dr. Evans by presenting the following memorial from the Medical and Chirurgical Faculty of the State of Maryland:

WHEREAS, The broadening field of public health evidently demands a special publication for the enlightenment of the profession and the public:

Resolved, That our delegates to the House of Delegates of the American Medical Association be, and are hereby, instructed to request the proper authorities of the American Medical Association to consider the feasibility of inaugurating the publication of a magazine or journal devoted to the instruction of the public on matters of public health, including the dissemination of information for the medical profession and the relation of the public to the profession.

Passed at the regular annual meeting at Baltimore, Md., April 24, 1912. JOHN RUHRÄH, Secretary.

Dr. William A. Evans, Illinois, moved that the resolution presented by Dr. Taneyhill be attached to the report of the Committee to Investigate the Advisability of Publishing a Health Journal, and that it be recommended favorably by the House of Delegates to the Board of Trustees. Carried.

Report of the Committee to Investigate the Advisability of Publishing a Small Medical Journal

Dr. J. N. McCormack, Kentucky, Chairman, presented the report of the Committee to Investigate the Advisability of Publishing a Small Medical Journal, as follows:

To the Members of the House of Delegates of the American Medical Association:

The suggestion of the President of "many general practitioners who are keen, earnest, industrious, overworked and ethical men, who desire and require scientific medical assistance," meets the approval of your committee. "They are diffident and reluctant to ask for it. It should be the purpose and accomplishment of this body to deliver to them this information." This may be done, he continues, "by the establishment of a dollar monthly periodical, this to contain working abstracts of articles in the larger journals, original articles on pathology, diagnosis and treatment of the more common ills, such as malaria, typhoid, diphtheria, tuberculosis, syphilis, hookworm, etc., brought up to date and by authorities, so that a man may have the latest information on the every-day diseases at his command. It can carry, in addition, personal news, medical economics, course of instruction, legal decisions on medical subjects, write-ups on climates, states, cities, hospitals and men; in other words, a breezy, gossipy, personally helpful magazine containing a large percentage of the most modern practical medical facts."

These suggestions are worthy of the great mind which conceived them. Describing the ideal medical journal of the class and size of the average medical journal, they should inspire the medical editor to conduct a cleaner and better publication. This Association may well point with pride to its great journal as the *summum optimum* of medical journalism. An everlasting monument not alone to the genius of its editor, but to the entire American profession, its every number contains many columns which help to carry new thoughts, better methods of practice and higher ideals to everyone who will read them. It is unfortunate that this ideal journal cannot reach every practicing physician in the Union.

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As it cannot at present hope to do this, is there no existing agency at our hand which can be remodeled so that it can more and more realize the ideal of our President?

Many of the journals of the state associations are appreciably near the high mark. Several privately owned journals are similarly conducted. Your committee does not consider as reputable a medical journal which accepts advertisements or reading notices of medicinal preparations which are fraudulent either in chemical composition or in therapeutic claims.

There are now 278 journals published in this country more or less medical. Many of these are absolutely disgraceful to the profession which supports them. Would this Association better conditions by adding another—even a better—small journal, to the already excellent minority, or shall the Association enlarge its office force in Chicago so as to be able to extend real help to those journals—organization or privately owned—which are actually being conducted along honest lines? After an extended correspondence with health authorities, general practitioners and with the best class of medical editors, your committee is decidedly of the opinion that the time has come when an amendment to our By-Laws should provide that no one shall be eligible to membership in the American Medical Association who is connected as owner or editor with any medical journal which accepts advertisements or reading notices of medicinal or other frauds, and that such frauds should be defined clearly.

Such a procedure, clearly outlawing the most blatant offenders against the profession would bring this matter to its attention in such a way that reputable medical journalism would be freed from this taint of corrupt commercialism. Unquestionably, such a procedure would for a time curtail the income of such journals as complied with it. Why should this committee not assist them?

Your committee therefore recommends that a committee, consisting of the Editor of THE JOURNAL, Dr. George H. Simmons; its subscription and advertising manager, Mr. W. C. Braun; its Secretary, Dr. A. R. Craig, and the editors of three state and one privately owned journal, to be selected by them, shall constitute a Committee on Medical Journalism, which shall be empowered, with the approval of the Board of Trustees, to employ an advertising manager and to furnish him with necessary office and office force, who shall assist such journals as are conducted in accordance with reasonable rules, as to plain honesty in their advertising and reading pages, in securing honest advertisements on a reasonable percentage basis; and a correspondent and his necessary assistants, who shall prepare or cause to be prepared scientific articles or abstracts on practical subjects of interest to the general practitioner for such of these journals as desire them; provided that such advertising manager or editor or committee shall not attempt in any way to influence the policy of any medical journal assisted as herein provided. With such assistance from this great Association, your committee feels that existing medical journals—state and privately owned—may fill the wants so aptly described by your President.

Respectfully submitted,

J. N. MCCORMACK, Chairman.

On motion, the report was referred to the Board of Trustees.

Report of the Committee on Relief Fund and Physicians' Sanatorium

Dr. Edward Jackson, Colorado, Chairman, read the report of the Committee on Establishment of Physicians' Sanatorium, as follows:

To the Members of the House of Delegates of the American Medical Association:

At the last meeting of the Association the House of Delegates endorsed the proposition to organize a corporation for the collection, care, and administration of a Relief Fund, and the supporting of a tuberculosis sanatorium; and directed that a committee of five be appointed with authority to add to their number one member from each state medical society, one from the society of the District of Columbia, and one from each of the government medical services, to bring the subject of the Relief Fund and Physicians' Sanatorium to the membership of state and local medical societies.

By correspondence with their presidents the matter has been brought to the attention of the various state medical societies, that of the District of Columbia, and also to the heads of the medical services of the various departments of the federal government. The enlarged committee has been formed, but it has been impossible to bring it together until this year's meeting of the American Medical Association. A meeting of the enlarged committee has been called, at which the matter will be taken up and discussed somewhat in detail.

In view of this your committee ask permission to present a supplementary report on a later day of this meeting.

Respectfully submitted,

EDWARD JACKSON, *Chairman.*

It was moved that the report be received and filed.

Motion seconded and carried.

On motion, the House of Delegates adjourned until 2 p. m., Tuesday, June 4.

Third Meeting—Tuesday, June 4, 1912

The House of Delegates met at 2 p. m., and was called to order by the President, Dr. Abraham Jacobi. Dr. Jacobi said:

"I have been elected simply to continue the business on hand, and I mean to do so. To-day I can say nothing to you. I hope you will have patience with my shortcomings, and if I have anything to say, as possibly I may within a day or so, you will bear me then, but for the time being we will go on with the business."

The Secretary called the roll, and fifty-six delegates responded.

The minutes of the previous meeting were read, corrected, and approved.

The Scientific Exhibit

Dr. W. T. Councilman, Massachusetts, took the floor on a question of personal privilege and called attention to the Scientific Exhibit, saying it was one of the best the Association had ever held. Its arrangement was excellent, the space allotted abundant, and the light good, but access to it very poor. He said there seemed to be an idea that the exhibit had not been sufficiently recognized, that its importance was minimized on account of its location, and he wished to correct that impression.

President Jacobi said that the House of Delegates should see to it that next year the principal part of the Scientific Exhibit should be on the floor where the registration is going on, as this would be a fine place for such an exhibit.

Report of the Council on Health and Public Instruction

Dr. Henry B. Favill, Illinois, Chairman, presented this report in abstract. The report was published in THE JOURNAL last week, page 1800.

Dr. J. N. McCormack, Kentucky, moved that the report be referred to the Reference Committee on Legislation and Political Action. Motion seconded and carried.

Report of the Committee on Uniform Regulation of Membership

Dr. Thomas McDavitt, Chairman, Minnesota, presented the Report of the Committee on Uniform Regulation of Membership. It appeared in THE JOURNAL last week, page 1811.

On motion of Dr. Jere L. Crook, Tennessee, the report was referred to the Reference Committee on Amendments to the Constitution and By-Laws.

Invitation to Australian Medical Congress

President Jacobi asked Dr. George H. Simmons, Illinois, to introduce Dr. J. W. Barrett, Melbourne University, Melbourne, Australia, to the House of Delegates.

Dr. Simmons, in introducing Dr. Barrett, said that he had come from Australia to invite the members of the American Medical Association to attend the Australian Medical Congress.

Dr. Barrett, being accorded the privileges of the floor, stated that the Australian Medical Congress met every three years. The next meeting would be held in Auckland, N. Z., and on behalf of the officials of the congress and the trustees of the University of Melbourne he invited the members of the American Medical Association to attend this congress in 1914, thus giving them an opportunity to visit Australia and New Zealand.

President Jacobi thanked Dr. Barrett for the kind invitation extended and on motion of Dr. Arthur T. McCormack, Kentucky, the invitation was referred to the Judicial Council.

Report of Committee on Establishment of a Physicians' Sanatorium

Dr. Edward Jackson, Chairman, presented the supplementary report of the Committee on Establishment of a Physicians' Sanatorium, as follows:

To the Members of the House of Delegates of the American Medical Association:

The enlarged committee, appointed to consider the establishment of a relief fund and tuberculosis sanatorium for physicians, presents the following supplementary report:

After a general informal discussion of various phases of the subject, the following resolutions were adopted:

It is the sense of the Committee that owing to the many difficulties of financing and administering a tuberculosis sanatorium for the benefit of physicians, such a project is, at this time, impracticable; that it is impracticable to organize a separate corporation for the collection and care and administration of a relief fund; and that if such fund is now to be established it must be administered by the American Medical Association and be drawn from the general funds of the Association.

The committee considers that only in the manner indicated would it be practicable to give the assistance asked for by the Home for Widows and Orphans of Physicians of Baltimore, Md.

The committee presents this as a final report and asks to be discharged.

Respectfully submitted,

EDWARD JACKSON, Chairman,
J. E. TUCKERMAN, Secretary,
For the Committee.

On motion, this report was referred to the Reference Committee on Miscellaneous Business.

Report of Committee on National Department of Health

Dr. John B. Murphy, Illinois, Chairman, presented the Report of the Committee on National Department of Health, as follows:

To the Members of the House of Delegates of the American Medical Association:

At no time has the prospect for the divorce of the supervision and control of the health interests of the federal government from unrelated interests been so bright as at present. The Senate Committee on Public Health and National Quarantine has favorably reported a bill for the establishment of an independent public health service, based on what is commonly known as the Owen bill, and the bill as reported is now on the Senate calendar.

In the House of Representatives, in whose organization public health has not as yet received the substantial recognition that has been given it by the Senate, a resolution is now pending, and is receiving serious consideration, providing for the establishment of a Committee on Public Health. The House of Representatives now has no such committee, and matters pertaining to the public health commonly find their way into the Committee on Interstate and Foreign Commerce and at times into other committees. The adoption of the pending resolution would, therefore, be a distinct advance in the public health organization of the national government—even independent of any changes that may be made in the executive branch of the government by the enactment of the Owen bill or of any similar measure—since it would provide a committee in whose deliberations the advancement of public health would be the controlling motive.

Returning now to the bill for the establishment of an independent federal public health service, the bill as reported by the Senate committee does not provide for the establishment of an executive department, whose chief executive officer would be by precedent and custom a member of the President's cabinet. It provides, however, for a public health service independent of all existing executive departments, the head of such service being made responsible directly to the President. To this proposed service are to be transferred the Public Health and Marine-Hospital Service; the Division of Vital Statistics, Bureau of the Census; so much of the work of the Bureau of Chemistry, Department of Agriculture, as relates to the control of foods and drugs; and such other branches of the federal government as the President may deem expedient. All of the functions and authority pertaining to these several branches of the government are to be vested in an independent federal public health service, and the future of that organization left to depend entirely on whetehr it does or does show itself worthy of support.

The bill as reported seems amply to guard against any lessening of the rank and dignity of any of the services affected by it, and against the lessening of the rank, dignity, or emoluments of any person employed in any such services; but in order that this point may be put beyond the range of any possible controversy, Senator Owen has introduced a proposed amendment guarding even more specifically against any such event. In this connection, however, your attention is invited to the bill now pending in Congress to improve the status of the physicians in the Public Health and Marine-Hospital Service, so as to put them on an equal plane so far as emoluments are concerned with the medical officers in the Army and Navy. This seems to be but an act of simple justice and the enactment of this bill should be furthered by all possible means, provided, of course, the bill is not made to carry with it legislation designed to prevent forever the establishment of a department of health.

There are several bills pertaining to the organization of the federal public health services now pending before Congress other than those referred to above, but they have not at the present time attained such status as to require the discussion of them here.

A subcommittee has been appointed by your committee to confer with representatives of the American Institute of Homeopathy, to enlist the active cooperation of that organization in the pending movement toward the establishment of an independent, properly coordinated federal public health service.

Your committee respectfully recommends:

1. That the Association reiterate its appeal for the enactment of legislation for the proper coordination of the public health activities of the national government in an independent public health service, along lines laid down in the Owen bill as reported by the Senate Committee on Public Health and National Quarantine, plus the amendment proposed by Senator Owen to maintain the status of the Public Health and Marine-Hospital Service.

2. That the Association endorse pending legislation to improve the status of the physicians employed in the Public Health and Marine-Hospital Service, provided such legislation be enacted in a form not calculated to prevent or delay the proper coordination and the independence of the public health work of the national government.

3. That the Association continue the Committee on National Health Organization, with instructions to use every proper means to procure the effective coordination and the independence of the public health work of the national government.

J. B. MURPHY, Chairman.
WILLIAM C. WOODWARD.
WILLIAM H. WELCH.
(with the exception of recommendation three)
J. N. HURTY.
W. A. EVANS.
J. N. MCCORMACK.

On motion of Dr. Arthur T. McCormack, Kentucky, the report was referred to the Reference Committee on Legislation and Political Action.

Report of the Committee to Arrange for Clinic Days

Dr. Charles L. Mix, Illinois, Chairman, presented the Report of the Committee to arrange for Clinic Days, as follows:

To the Members of the House of Delegates of the American Medical Association:

The Committee on Clinic Days was authorized at the 1911 meeting of the American Medical Association when the House of Delegates adopted the report of the Reference Committee on Reports of Officers, in which it was recommended that:

> "Another committee of five be appointed by the president to arrange for one clinic day before, and one day after the close of the annual session."

The committee appointed by Dr. John B. Murphy, president, after the close of the meeting, is as follows: Charles L. Mix, chairman, Chicago; Edward Martin, Philadelphia; Philip Marvel, Atlantic City; Alexander Lambert, New York City, and John M. T. Finney, Baltimore, Md.

The committee recently met in Philadelphia and discussed the general subject. It was thought wiser after correspondence with the chairmen and secretaries of the fourteen Sec-

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tions of the American Medical Association to abandon the idea of having the fourteen Sections participate in this set of clinics by reason of the fact that many of the chairmen and secretaries did not feel enthusiastic about arranging for a program. It was also thought wiser to have no duplication of programs but instead to arrange for a limited number of clinics which should not overlap but which would be consecutive. It was decided that Monday, June 3, could best be devoted to the advances which have been made in medicine, surgery, pathology, etc., during the last year, and further, that the most representative men in the United States be invited to participate in this clinic. The following program was therefore finally arranged for June 3, 1912, at Atlantic City.

Milton B. Hartzell, Philadelphia—Recent Contributions to the Diagnosis and Therapy of Skin Diseases.

Alfred Stengel, Philadelphia—Recent Contributions Toward a Fuller Understanding of Cardiovascular Diseases.

Robert W. Lovett, Boston—Recent Advances and Some Fundamentals in Orthopedic Surgery.

John B. Murphy, Chicago—Recent Contributions Toward the Advancement of Clinical Surgery.

Louis B. Wilson, Rochester, Minn.—Recent Advances in Medicine and Surgery Incident to the Study of Living Pathology.

Chevalier Jackson, Pittsburgh—Improved Diagnostic Methods in the Study of the Respiratory Tract.

Simon Flexner (or associate).—Recent Contributions to Medicine, with Special Reference to the Work of the Rockefeller Institute.

Harvey R. Gaylord, Buffalo—Recent Contributions to the Solution of the Cancer Problem.

It was decided to devote the whole of Monday to the above program, with the exception of the evening, which it was decided to give over to the Army, Navy, United States Public Health and Marine-Hospital Service, and the Isthmian Canal Commission. Letters were accordingly sent to Surgeon General George R. Torney, United States Army; Surgeon General Charles F. Stokes, United States Navy; Surgeon General Rupert Blue, United States Public Health and Marine-Hospital Service, and Colonel William C. Gorgas, Chief Sanitary Officer, Canal Zone. The following nominations were made by these officers:

UNITED STATES ARMY

Major Frederick F. Russell—Army Experience with Typhoid Prophylaxis.

UNITED STATES NAVY

Medical Inspector E. R. Stitt, Surgeon A. W. Dunbar—Recent Advances in Sanitation in the United States Navy.

UNITED STATES PUBLIC HEALTH AND MARINE-HOSPITAL SERVICE

Passed Assistant Surgeon J. F. Anderson—Recent Contributions by the United States Public Health and Marine-Hospital Service to Preventive Medicine.

ISTHMIAN CANAL COMMISSION

Drs. W. M. James and W. C. Deeks, Ancon Hospital, Ancon, C. Z.—The Diagnosis and Treatment of Amebic Dysentery.

It was the further decision of the Committee on Clinic Days to arrange for supplementary programs for Friday, June 7, 1912, at Philadelphia, Baltimore and New York. The arrangement of the program to be given at Philadelphia was entrusted to Dr. Edward Martin who selected Dr. John B. Deaver as the local chairman. By his energy a most satisfactory program has been arranged for at the various Philadelphia hospitals, and this program will appear in the *American Medical Association Bulletin*.

Dr. John M. T. Finney, appointed by your Committee to arrange for a program at Baltimore, selected as the local chairman, Dr. Thomas S. Cullen who has arranged for a similar clinical day at Baltimore for Friday, June 7, 1912

The Committee on Clinic Days would respectfully suggest that if it be continued, its expenses be provided for in the annual budget of the Association. It also suggests that THE JOURNAL give greater publicity to any future meetings that may be held than was given to the meeting at Atlantic City in June, 1912. Notwithstanding the fact that but few knew of the program arranged for by your Committee, about 500 were present in the afternoon session, and nearly that number in the evening session.

Respectfully submitted,

CHARLES LOUIS MIX, Chairman.

On motion of Dr. J. W. Fleming, New York, the report was received and the committee continued.

Report of the Reference Committee on Amendments to the Constitution and By-Laws

Dr. Arthur T. McCormack, Kentucky, Chairman, presented the Report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows:

Your Committee to which was referred the Report of the Committee on Uniform Regulation of Membership cordially commends the report and recommends that it be adopted and that the Secretary be instructed to communicate its conclusions to the constituent associations.

Your Committee recommends that the Report of the Committee to formulate amendments to the Constitution and By-Laws to extend membership including the pending amendments to the Constitution introduced at the 1911 session, be referred to the Judicial Council with power to confer with constituent associations and to report to the House of Delegates.

The Committee further recommends that Chapter III, Section 1, of the By-Laws be amended to read as follows:

Section 1. Delegates must have been members of the American Medical Association for two years.—No one shall serve as a member of the House of Delegates who has not been a member of the American Medical Association for at least the two years immediately preceding the meeting of the House of Delegates at which he is to serve.

The Committee further recommends that Section 2, of Chapter IX, be amended by adding the following:

The House of Delegates may recall the election of any officer or the appointment of any member of a committee or Council at any session by a two-thirds vote of the members present and voting, provided that no motion for recall shall be acted on till the day following that on which it is introduced.

The Committee further recommends that the Board of Trustees be directed to secure the amendment of the Charter so as to provide that the President, the Secretary and the Editor of THE JOURNAL shall be ex-officio members of the Board of Trustees without the right to vote, and that the Secretary of the Association shall be ex-officio Secretary of the Board of Trustees; and that the Board report its action to the next annual session of the House of Delegates so that the By-Laws may be amended accordingly and that the following words be added to Article 10, Section 2, of the Constitution.

"and the President, Secretary and Editor of THE JOURNAL shall be members of the Board of Trustees without the right to vote."

The Committee further recommends that the Judicial Council be requested to investigate the secret division of fees and the giving of commissions and the matter of contract practice, and recommend such action by the House of Delegates and the constituent associations as will remedy existing evils.

Your committee approves the suggestion of the Secretary in regard to invited guests and recommends that Section 9, Chapter I, of the By-Laws be amended to read as follows:

SEC. 9. INVITED GUESTS.—Scientists who are not eligible to membership in the component society of the locality in which they reside may be invited by the general officers, or by the officers of a section, to attend any annual session and to take part in the scientific work. They shall be designated as invited guests and be entitled to participate in the scientific and social functions.

It also approves the action of the Board of Trustees in making slight modifications of the By-Laws as affecting postal rates and recommends that the first paragraph of Section 2, Chapter I, be modified to read as follows:

MEMBERS.—Any physician, reported as a member in good standing of a constituent association by the secretary of that association, who on the prescribed form shall apply for membership and subscribe for THE JOURNAL, paying the annual dues for the current year, shall be a member.

And that Section 5 of Chapter I be amended so as to read:

DELINQUENCY.—Any member who, for one year, has failed to pay his annual dues shall forfeit his membership thirty days after notice from the secretary has been mailed to his last known address.

And that Chapter XIII be amended to read:

The annual dues shall be five dollars, payable in advance on the first day of January of each year, of which not less than four dollars shall be credited to the subscription for one year to THE JOURNAL.

The committee approves the Report of the Judicial Council and recommends that the rules to govern the Judicial Council and the methods of procedure be adopted:

RULES TO GOVERN THE JUDICIAL COUNCIL

1. The Judicial Council shall meet during the annual session of the American Medical Association and at other times at the call of the chairman or on the written request of three members of the Council.

2. Three members of the Judicial Council shall constitute a quorum.

3. It shall require the affirmative vote of a majority of the Council to decide any question.

4. The time and place of the meetings of the Council shall be announced in each call for a meeting, which call shall be issued at least thirty days before the time of the meeting to the members of the Council and the parties to any question pending.

5. In the adjudication of all questions involving the character and status of individuals or societies, the parties implicated must be duly informed in writing of the charges and afforded an opportunity for defense.

6. No mere hypothetical question asking for expression of opinion shall be considered by the Council and no question of any character shall be considered until such question is referred to the Council in accordance with the rules adopted for its procedure.

METHODS OF PROCEDURE

1. In all cases in which the Council has original jurisdiction, questions must be stated in writing whenever they are submitted by action of the House of Delegates or by any of the constituent state associations.

2. In all cases in which the Council has appellate jurisdiction, action must be originated by written appeal made by the individual or organization aggrieved.

3. Documentary evidence in printed or typewritten form must be presented to the Secretary of the Council with a copy of the complaint.

4. The Judicial Council shall set a time for the hearing of the cases that are referred to the Council and shall give notice to the prosecutor and to the defendant of the time and place at which the hearing is to be held. Such notice shall be mailed to both parties to the controversy at their last known address not less than thirty days before the date set for the hearing, and no hearing shall be held without this notice unless this condition be waived in writing by both the prosecution and defense.

5. The prosecutor and the defendant, or either of them may be represented before the Judicial Council by any member of the organized medical profession included in the American Medical Association.

6. The attendance at all hearings of cases shall be limited to the members of the Judicial Council, the secretary of the Council, the two principals and their representatives and the witnesses called in the case, provided, however, that at the request of the accused, the Judicial Council, at its discretion, may hold a public hearing. Should either party to the controversy fail to appear in person or to be represented by a member of the Association at the time and place regularly set for the hearing, the Judicial Council shall, at its discretion, continue the case, quash the indictment, or render a decision.

The committee recommends that Section 4, Chapter I, of the By-Laws be amended to read as follows:

THE EFFECT ON MEMBERSHIP OF REMOVAL TO ANOTHER STATE.—A member who changes the location at which he practices medicine from the state through whose constituent association he holds membership in the American Medical Association to another state in which there is a constituent association, is eligible to membership in the component society of his new location upon the presentation of a transfer card and an official statement that his dues have been paid in full in the society in which he holds membership. He shall forfeit his membership in the American Medical Association one year after such change of location, unless he becomes a member of the constituent association of the state to which he has moved. Provided, however, that if the component society into whose territory such a member has moved shall refuse him membership, the member shall be privileged to appeal to the Judicial Council of this Association to determine whether or not he be guilty of any act that warrants the enforcement of the provisions of this section. Pending the decision of such appeal, he shall retain his membership in the American Medical Association through his original state association. And provided further, that the term, "the practice of medicine," throughout these by-laws shall be held to mean the offering of service or counsel for the relief of those suffering from abnormal physical or mental conditions.

The committee further recommends that the second paragraph of Section 2, Chapter I, of the By-Laws be amended by substituting for the present paragraph the following:

Commissioned medical officers of the United States Army, United States Navy and the United States Public Health and Marine-Hospital Service shall be members of this Association so long as they are engaged actively in their respective service and thereafter if they have been retired on account of age or physical disability. These members shall not be required to pay dues and shall not receive THE JOURNAL of the American Medical Association except by personal subscription.

The committee further recommends that the last sentence of Section 4, Chapter IX, of the By-Laws be amended by inserting the words "at its discretion" following "may" and the word "general" following "investigate" so that the Section as amended shall read as follows:

The Judicial Council may, at its discretion, investigate general professional conditions and all matters pertaining to the relations of physicians to one another and to the public and shall make such recommendations to the House of Delegates and the constituent associations as it deems necessary.

Your committee asks for further time as to the other matters pending before it.

Your committee to which was referred the resolution of Dr. Wetherill of the Section on Obstetrics and Gynecology approve the proposed alteration in the By-Laws and recommend that Chapter XI, Section 1, Heading 3, be amended to read as follows:

OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

Your Committee approves the Report of the Judicial Council submitting the Principles of Medical Ethics as revised by the Judicial Council and recommend its adoption with the following slight changes. [The full draft appeared in THE JOURNAL last week, page 1790. The sections in which changes were recommended are repeated below as corrected.]

CHAPTER II.

SEC. 4.—Solicitation of patients by circulars or advertisements, or by personal communications or interviews, not warranted by personal relations, is unprofessional. It is equally unprofessional to procure patients by indirection through solicitors or agents of any kind, or by indirect advertisement, or by furnishing or inspiring newspaper or magazine comments concerning cases in which the physician has been or is concerned. All other like self-laudations defy the traditions and lower the tone of any profession and so are intolerable. The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced, but must be the outcome of character and conduct. The publication or circulation of ordinary simple business cards, being a matter of personal taste or local custom, and sometimes of convenience, is not *per se* improper. As implied, it is unprofessional to disregard local customs or offend recognized ideals in publishing or circulating such cards.

It is unprofessional to promise radical cures; to boast of cures and secret methods of treatment or remedies; to exhibit certificates of skill or of success in the treatment of diseases; or to employ any methods to gain the attention of the public for the purpose of obtaining patients.

SEC. 5.—It is unprofessional to receive remuneration from patents for surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances, or perquisites from attendants who aid in the care of patients.

ARTICLE VI.—COMPENSATION

SECTION 1.—The poverty of a patient and the mutual professional obligation of physicians should command the gratuitous services of a physician. But institutions endowed by societies, and organizations for mutual benefit, or for accident, sickness and life insurance, or for analogous purposes should be accorded no such privileges.

[Sec. 3 is omitted and Sec. 4 becomes Sec. 3.]

SEC. 3. It is detrimental to the public good and degrading to the profession, and therefore unprofessional, to give or to receive a commission. It is also unprofessional to divide a fee for medical advice or surgical treatment, unless the patient or his next friend is fully informed as to the terms of the transaction. The patient should be made to realize that a proper fee should be paid the family physician for the service he renders in determining the surgical or medical treatment suited to the condition, and in advising concerning those best qualified to render any special service that may be required by the patient.

Respectfully submitted,

A. T. MCCORMACK, Chairman.
S. G. KAHN,
W. L. NOBLE,
W. B. RUSS,
SEALE HARRIS.

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Dr. A. W. McAlester, Missouri, moved that the recommendations be read and voted on seriatim. Motion seconded and carried.

On several motions, duly seconded and carried, the sections of the report were adopted.

New Principles of Ethics Adopted

The report relating to the Principles of Medical Ethics was then presented for adoption as a whole. After discussion by Drs. U. C. Collins, Illinois; Wendell C. Phillips, New York; A. C. Cotton, Illinois; F. W. Robbins, Michigan; Miles F. Porter, Indiana; Curran Pope, Kentucky, and Arthur T. McCormack, Kentucky; Dr. E. J. Goodwin, Missouri, offered the following motion:

I move that action on the code submitted by the Judicial Council be postponed for one year; that copies of it be mailed to every member of the House of Delegates and to the incoming members next year, with instructions to study it and come prepared to vote on it at that time; that the Judical Council ask for opinions from members of the house in the interim between this and the next meeting for their information and tabulation and report at the next meeting. Motion seconded.

After discussion by Drs. Arthur T. McCormack, Kentucky; C. E. Cantrell, Texas; Hubert Work, Colorado; E. J. Goodwin, Missouri; G. V. I. Brown, Wisconsin; Luther B. Kline, Pennsylvania, and G. Lane Taneyhill, Maryland, the President put the motion to postpone and declared it lost.

Dr. Taneyhill moved the adoption of the Principles of Medical Ethics recommended by the Reference Committee. Motion seconded and carried.

On motion, duly seconded, the report of the Reference Committee on Amendments to the Constitution and By-Laws was adopted as a whole.

Additional Report of Committee on Credentials

Dr. D. Chester Brown, Connecticut, Chairman presented a report from the Committee on Credentials, and stated that the credentials of Dr. J. H. McCracken, Texas, had been examined, and it was found that Dr. McCracken had been duly elected as a delegate by the Texas State Association, but that the records in the Secretary's office recorded Dr. McCracken as having become a member of the Association in June, 1911.

On motion of Dr. C. E. Cantrell, Texas, which was duly seconded and carried. Dr. McCracken was seated as a delegate.

Report of Reference Committee on Reports of Officers

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your Committee on Reports of Officers begs leave to report that it concurs in the President's recommendations, as follows: That the legislative work of this Association be transferred from the Council on Health and Public Instruction to a Council on Medical Legislation to consist of five members, to be elected by the House of Delegates, one for five years, one for four years, one for three years, one for two years, and one for one year. Thereafter, one member shall be elected each year to serve five years. The Council shall organize and adopt such regulations for the government of its action as is deemed expedient. The Secretary of this Association shall be the secretary of the Council. The Council shall expend money or contract financial obligations only as shall be authorized in writing by the Board of Trustees and the Board of Trustees shall be instructed to furnish the necessary financial aid.

The committee concurs in the further recommendation that the House of Delegates requests the Council on Medical Education to take some action in recognition of the founding of the first medical college in the United States by Dr. John Morgan of Philadelphia in 1765.

The suggestion that the Committee on Clinic Days for the Association be made permanent is recommended by your committee, believing that the inauguration of clinics as a permanent feature of the Association proceedings will be attractive to visitors and a distinct advance in presenting medical instruction on special subjects to members.

The full and concise report of the Board of Trustees made no specific recommendations properly coming before this committee. Supplemental reports were attached, showing itemized appropriation of funds, together with sums expended and balances remaining, also the pay-roll for the month of May, showing salaries and wages paid to each officer and employee, by name, which I shall read separately if anyone so desires. We endorse the Secretary's suggestion aimed to facilitate and improve the work of the House of Delegates.

During the past year there has been some conflict regarding the scope of the work of the special committees that were appointed at the last meeting of the House of Delegates and the established councils of the Association. In order that all the activities of the Association may be coordinated it is advisable that the House of Delegates extend the courtesy of the floor to the members of the various councils and especially that it request the secretaries of these councils to attend the sessions of the House, according them the privilege of the floor, in order that the House may be constantly in position to obtain information concerning work that is being done by these councils that this body may direct these activities.

We also heartily concur in the Secretary's request that the House take time properly to consider the matters brought before it and finally to act only after mature deliberation on them. Every resolution should be referred to its proper reference committee before final action by the House.

Every year undigested resolutions are hastily passed, entailing unnecessary work with confusion of objects. We see a growing tendency to delegate duties to committees—a practice not in itself objectionable, except that the reports of these committees are usually the work of the chairman, approved by the remaining members with scant consideration. The duties of the House then are performed by a very few men, without much discussion, which is in our opinion contrary to the proper spirit and best interests of the Association.

We further recommend that the work on organization be taken out of the work of the Council on Health and Public Instruction, as it is an entirely independent function, and that it be placed under a Council on Organization, to be elected by the House of Delegates to consist of five members, one of whom shall be elected for a period of five years, one for four years, one for three years, one for two years, and one for one year and one each succeeding year for five years.

Additional recommendations contained in the reports of officers properly belonging to other committees have been referred to them.

Respectfully submitted,
HUBERT WORK, Chairman,
J. W. ELLIS,
DONALD CAMPBELL,
J. W. YOUNG,
E. A. HINES.

Dr. A. T. Bristow, New York, moved that each recommendation in the report be considered separately. Seconded and carried.

The report was then read by sections.

On motion, the section authorizing the establishment of a Council on Legislation was referred, after discussion by Drs. A. R. Mitchell, Nebraska; D. Chester Brown, Connecticut; Hubert Work, Colorado; H. D. Arnold, Massachusetts, and A. W. McAlester, Missouri, to the Council on Health and Public Instruction for consideration and report at the next annual session.

Subsequent sections of the report were on several motions, which were duly seconded, adopted, with the exception of the last section authorizing the establishment of a Council on Organization. It was moved and seconded that this section be referred to the Council on Health and Public Instruction for its consideration with the request that it report to the House at its convenience. Carried.

It was moved, with the exception of the two items, referred as above, that the report be adopted as a whole. Motion seconded and carried.

Dr. Donald Campbell, Montana, moved that the Board of Trustees be instructed to empower and direct the Secretary to mail a copy of the Principles of Medical Ethics to every member of the Association in booklet form. Motion seconded and carried.

Dr. Arthur T. McCormack moved that the motion be referred to the Board of Trustees.

The motion was seconded and carried

Petition for the Formation of a Section on Proctology

Dr. Dwight H. Murray, New York, presented the following:

To the American Medical Association: We, the undersigned, members of the American Proctologic Society and also members of the American Medical Association, do respectfully petition your honorable body to form a Section on Proctology, which we agree to register in and actively support, as we believe that the interest of the public can be best conserved by an earnest effort to educate the general profession through the American Medical Association.

The American Proctologic Society was organized in Columbus, Ohio, in 1899. Since then we have held regular annual meetings at the time and place of the meetings of the American Medical Association with an average attendance of from fifty to one hundred.

Our membership was originally limited to thirty, but the interest in this line of work has increased so rapidly that we have been forced to extend our membership to fifty, which is now practically filled and there are a number of applicants pending election.

We herewith submit copies of the transactions of the American Proctologic Society for the years 1908, 1909, 1910 and 1911, a copy of the constitution and by-laws and the program of this year's work, which also includes the list of members.

Respectfully submitted,

J. L. JELKS, President, Memphis, Tenn.
A. Z. ZOBEL, Vice-President, San Francisco.
LEWIS H. ADLER, JR., Secretary, Philadelphia.
LOUIS J. HIRSCHMAN, Detroit.
A. B. GRAHAM, Indianapolis.
GEORGE W. COMBS, Indianapolis.
J. A. MACMILLAN.
COLLIER F. MARTIN, Philadelphia.
E. H. TERRELL, Richmond, Va.
FRANK C. YEOMANS, New York.
RALPH W. JACKSON, Fall River, Mass.
SAMUEL T. EARLE, Baltimore.
J. COLES BRICK, Philadelphia.
J. RAWSON PENNINGTON, Chicago.
SAMUEL G. GANT, New York.
WILLIAM M. BEACH, Pittsburgh.
GEORGE B. EVANS, Dayton, O.
JAMES P. TUTTLE, M.D., New York.
JEROME M. LYNCH, New York.
DWIGHT H. MURRAY, Syracuse, N. Y.
G. S. HANES, Louisville.
B. J. DREYFUSS, New York.

The chair directed that this petition be referred to the Reference Committee on Sections and Section Work.

Dr. J. H. J. Upham, Ohio, presented the following resolution:

Resolved, That the National Association of State Secretaries and Editors requests that arrangements be made for a meeting of this association in Chicago during the fall of 1912, and that the Board of Trustees be requested to appropriate a fund sufficient to pay the expenses of members in attending the meeting, which is to be devoted to an interchange of views as to the most effective method of work.

The Chair directed that this resolution be referred to the Board of Trustees.

On motion, the House of Delegates adjourned until 2 p. m., Wednesday, June 5, 1912.

Fourth Meeting—June 5, 1912

The House of Delegates met at 2:10 p. m. and was called to order by the President.

The Secretary called the roll, eighty-two members present.

The minutes of the previous meeting were read and adopted.

Supplementary Report of Board of Trustees

Dr. W. W. Grant, Colorado, Chairman of the Board of Trustees, reported for the Board that in the matter of the resolution offered by Dr. Upham to provide for a meeting of the Association of State Secretaries and Editors, the Board recommends that the request be referred to the Board of Trustees for final action to be taken at the October meeting of the Board. Also regarding the establishment of a health journal, the Board recommends that if it is feasible to undertake the publication of such a journal, the House authorize the Board of Trustees to proceed at once with the work.

On motion, duly seconded, the recommendations of the Board were adopted.

Report of Committee on Anesthesia

Dr. Yandell Henderson, Connecticut, Chairman, read the report of the Committee on Anesthesia, which was referred to the Reference Committee on Reports of Officers.

The report is as follows:

To the Members of the House of Delegates of the American Medical Association:

The functions of this committee are to gather and analyze data regarding anesthetics, to initiate and stimulate investigation, and to make such recommendations to the House of Delegates and to the members of the American Medical Association generally as a careful consideration of the present status of anesthesia may suggest.

Recent developments in this field afford ground for the hope that we are today at the beginning of an epoch of progress in anesthesia unequalled since its original discovery and introduction. We shall indicate briefly certain of the recent discoveries and improvements which in our judgment deserve prompt and general adoption, and shall suggest the lines along which others may profitably be developed. We desire, however, to give the first place in this report to the discussion of a broader question, namely, the status of anesthetics in relation to the future development of anesthesia.

In the judgment of your committee the easiest and safest line of approach to many of the practical problems of anesthesia today lies in the recognition of anesthetists as specialists on a par in the importance and difficulty of their work with those in other branches. In all of our larger cities a certain number of men of particular aptitude and interest are devoting all, or the greater part, of their time to administering anesthesia. This practice should be in every way encouraged. Similarly the administration of anesthesia by those whose work has been almost entirely in other lines should be severely discouraged. The physician who would not think of undertaking a major surgical operation will frequently, without hesitation, assume the equally great responsibility of anesthetizing for such an operation. It should be recognized that the welfare of the patient demands skill on the part of the anesthetist no less than on that of the surgeon.

Anesthesia should cease to be regarded as merely an adjunct of surgery. It is a topic in which surgeons as a rule take relatively little interest. It should be in charge of those whose principle aim is, not to see as much of the operation as possible, but to administer anesthesia in such a manner as to bring the patient through with the least possible loss of vitality.

Every hospital, certainly every large hospital, should have as a regular member of its staff an attending anesthetist (as is the case, for example, at the Massachusetts General Hospital in Boston and at the Church Home and Infirmary in Baltimore), whose authority in his special department should be as complete as is that of the attending physician or surgeon in their fields. This arrangement will be particularly important during the next few years when the older methods of anesthesia—chloroform, ether, cocain, etc., will be competing with, and greatly modified by, newer procedures, e.g. nitrous oxid, intratracheal insufflation, spinal anesthesia, intravenous anesthesia (chloroform and hedonal in saline), intra-arterial injection of novocain by the methods of Bier and Ramshoff, measures for the prevention and relief of acapnia, the prevention of pain associations (as practiced by Crile), etc.

One of the practical questions of increasing importance is whether routine anesthesia in hospitals should be given by interns in continually changing assignment with the disadvantage of having to train a novice every few weeks or months, or by a nurse devoting her entire time to this work. To either of these arrangements there are objections. We do not believe, however, that any decisive opinion one way or the other on this matter can now be formed. The problem should be placed in the hands of attending anesthetists and left to them to work out. The day when anesthesia was supposed to require nothing more than a bottle of ether or chloroform and a towel or some simple mask is rapidly passing. The newer procedures above mentioned, some of which will undoubtedly come into extensive use if the not distant future, will demand a degree of knowledge and intelligence far beyond the requirements of the past or present. The hospital which relies wholly upon nurses, or wholly upon interns, without the supervision of an expert attending anethetist, will be unable to adopt the newer procedures without serious risk of accident. If these procedures will lessen mortality and prevent suffering, as there is good reason to believe that they will, there can be no sufficient justification for adhering to the older methods merely because they require less intelligence and experience to administer.

During the past year an important step toward the recognition of anesthesia as a special field of practice and investiga-

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tion has been taken in the organization of the New York Society of Anesthetists. A member of this committee has attended all of its meetings, and can testify to the high quality of the papers presented and the stimulating character of the discussions following them. Nothing conduces to rapid progress in any field of work so much as meetings which bring otherwise isolated workers into personal contact with those of similar interests. We understand that it is proposed to broaden this society into a national body. We bespeak for it the cooperation and assistance of the officers of the American Medical Association. At the request of the Society of Anesthetists, conveyed through this committee, the Sections on Pathology and on Pharmacology have united at this meeting for a joint symposium on anesthesia.

The papers to be read in this symposium and later published in THE JOURNAL of the American Medical Association will present the recent advances in knowledge, and improvements in technic with completeness and authority. A detailed discussion need not therefore be included in this report. We shall confine ourselves to certain specific recommendations.

(1) The use of chloroform as the anesthetic for major operations is no longer justifiable. Scientific investigation and clinical experience agree in demonstrating that necrosis of the liver ("delayed chloroform poisoning") follows in a by no means inconsiderable percentage of cases. The mode of causation of this sequel is unknown. There are therefore no precautions that can be intelligently taken against it. Accordingly the surgeon whose patient dies in this manner a day or two after operation must face the responsibility of having knowingly taken an unnecessary chance—and lost. We see no reason to believe that in respect to toxicity there is more than a slight quantitative difference between chloroform alone and such chloroform mixtures as A. C. E., anesthol, etc.

(2) For minor operations also the use of chloroform should cease. In general it may advantageously be replaced by nitrous oxid, or nitrous oxid-oxygen. It is a mistake to think that a fatality under anesthesia is necessarily due to an unusually large administration of the anesthetic. A previous condition of suffering or anxiety, or a prolongation of the stage of anesthetic excitement renders a subject who would otherwise be able to resist a large dosage liable to collapse even under a small dosage. The practical importance of avoiding so far as possible all anxiety and pain has been demonstrated on the clinical side by Crile, and experimentally by Henderson. It is noteworthy that Levy (with Cushny) has recently demonstrated that in cats a sudden heart failure (fibrillation) is induced by a period of *light* chloroform anesthesia, while this form of death is not inducible by deep anesthesia. Risks of this sort are far greater with chloroform than with ether, and greater with ether than with nitrous oxid. As they cannot be foreseen, they can not be avoided, except by replacing a dangerous anesthetic by a safe one.

(3) Chloroform is sometimes found convenient for initiating anesthesia in alcoholics or other difficult subjects. As a means of avoiding the ill effects of a prolonged period of ether excitement the temporary employment of chloroform for this purpose is perhaps sometimes the lesser of two evils. It is justifiable only when nitrous oxid is not available. If chloroform is to be so used, it should be given as soon as it is evident that the patient will not go under ether readily. Unless the change to chloroform is made early it should not be made at all. We wish especially to emphasize the point that chloroform should never under any circumstances be administered after a prolonged period (10 or 15 minutes or more) of ether excitement. Even a small administration of chloroform is then peculiarly liable to induce respiratory or cardiac death. As soon as full anesthesia is attained ether should be substituted.

(4) As regards ether, the two points to be especially emphasized are that anesthesia should always be induced quickly, and that throughout its entire duration it should be as nearly uniform as possible. Physiology has demonstrated that the predominant stimulant maintaining respiration in a normal subject is the CO_2 in the blood. If for even a few minutes this gas is exhaled more rapidly than it is being produced, a compensatory period is liable to follow in which all spontaneous breathing ceases. This apnea vera tends to last until the body has reaccumulated its normal store of CO_2, and the respiratory center is thereby again stimulated to its normal activity. During the initial period of etherization, the so-called stage of excitment, the subject generally breathes excessively. The analyses of Henderson have shown that if this period is prolonged a condition of intense acapnia (deficiency of CO_2) results. When full anesthesia is thereafter attained the subject, although acapnic and prone to apnea, is still sufficiently stimulated by the influence of ether so that, in the majority of cases, an apparently natural or even excessive respiration is maintained. This condition may continue even up to the end of a long operation. At any time, however (and the tendency increases as time goes on), the balance between the stimulant action of ether and the depressant influence of acapnia may become negative, and the subject stops breathing. If the acapnia is sufficiently intense, this respiratory failure (apnea) may continue until death results from lack of oxygen. Fortunately lack of oxygen also exerts indirectly some stimulating influence upon respiration. Otherwise such fatalities would be much more frequent than they are. We are of the opinion that respiratory failure may be in certain cases the indirect result of an unskillful timidity which, by prolonging the stage of excitement, induces acapnia, rather than the direct result of over-boldness in the administration of ether at the moment of failure.

(5) It is a well demonstrated and important rule that a subject who has once been etherized or chloroformed cannot be again anesthetized within a few hours without great risk. Essentially the same danger is involved in allowing the intensity of anesthesia to vary during an operation. It is not the anesthetist who at all times maintains uniformly deep anesthesia whose patient stops breathing. This accident comes particularly to those who administer so irregularly that the patient at times comes nearly out of anesthesia and again is plunged into profound narcosis. In the production of a fatality the intervals of incomplete anesthesia play a part as great as, or even greater than, the period of profound narcosis which immediately precedes the respiratory (or cardiac) failure. Anesthesia is good in proportion as it is uniform.

(6) Offenses against this principle occur most frequently in adenoid and tonsillar operations. When the death of the patient (usually a child) results it is assigned either to "heart disease" or to an "unrecognized condition of status lymphaticus." It is probable that in most cases these deaths are merely the natural result of intermittent anesthesia and of the increased susceptibility induced by fear. Under the ordinary methods the anesthetist and the operator are alternately in control of the patient's nose and mouth. The method of intratracheal insufflation introduced by Meltzer and Auer appears to be peculiarly well adapted to afford a safe anesthesia and at the same time to keep the field of operation clear, and the anesthetist out of the way. There is now a sufficient accumulation of clinical experience with this method to demonstrate its safety and convenience. We recommend that it be widely adopted. For operations on the head and neck, when it is advantageous to keep the anesthetist out of the surgeon's way, most of the advantages of intratracheal insufflation are afforded by intrapharyngeal insufflation with the simple apparatus (air blower, ether vaporizer, and catheter inserted through one nostril) devised by Thomas. Gwathmey has shown the marked advantage of warming ether vapor, even in the ordinary methods of administration. For any form of insufflation an arrangement for heating is essential.

(7) Theory and practice alike demonstrate the propriety in the large majority of major operations of administering subcutaneously a liberal dose of morphin half an hour or more before initiating anesthesia. It obviates anxiety, diminishes the intensity and duration of the stage of excitement, and lessens pain after the anesthesia is terminated. These are all points of marked advantage in conserving vitality. Morphin is par excellence the prophylactic against shock. Against the use of morphin it has been argued that it depresses respiration and thus tends to delay the elimination of the anesthetic after the operation. This is true, and it is a point of importance. In the next section is set forth a method of overcoming this disadvantage.

(8) We suggest that in every operating room there be kept on hand and available for immediate use tanks of oxygen containing 8 or 10 per cent. of CO_2. We have communicated with all of the principal companies manufacturing gases for clinical use, and we have been informed by them, not only that they can supply such a mixture, but that as soon as there is a considerable demand for it they will be able to do so at the same price as that charged for pure oxygen. It has been demonstrated that CO_2 (properly diluted) is by far the most efficient (because it is the natural) respiratory stimulant. The carbonated oxygen is conveniently administered by means of such a mask and bag as is ordinarily used for nitrous oxid. It should be administered at the first sign of respiratory or circulatory failure. By using it at the outset of anesthesia by any "closed" method a more rapid absorption of ether may

be obtained, and a consequent shortening of the period of excitement. By administering it alone after the operation respiration is stimulated to a more rapid elimination of the anesthetic in even a deeply morphinized subject. It is thus easy to prevent the prolonged period of subnormal breathing with its cyanosis and ether retention which now frequently follows anesthesia. For the last mentioned purpose it would be equally effective and much cheaper to employ pure CO_2 (such as is used in the manufacture of carbonated table waters) diluted with 10 to 12 volumes of air. An apparatus for effecting this dilution is now being devised and tested by a member of this committee, and will probably be available for general use within a few months.

(9) The most important event in the recent progress of practical anesthesia was the demonstration by Gatch of the beneficial effects of a certain amount of rebreathing in nitrous oxid oxygen anesthesia. It affords a clinical confirmation of the validity of the acapnia theory in relation to anesthetic fatalities. As the result of Gatch's work nitrous oxid oxygen, reenforced when necessary with a very small amount of ether, and administered by "rebreathing" methods, is being extensively adopted as the anesthesia of choice for major operations involving a considerable amount of shock, or upon already shocked subjects. A number of ingenious and convenient forms of apparatus for the administration of nitrous oxid have recently been devised and put upon the market. We have examined them, but feel that it is as yet too early to decide on their relative merits. In one respect all of those that we have seen are defective, namely, in the insufficient closeness of the mask upon the face. If the air in any quantity leaks into the mask and bag, the oxygen which it contains is quickly absorbed, and leaves the nitrogen. As air is 4 parts nitrogen to 1 of oxygen, the mixture of nitrous oxid and oxygen which the patient is breathing soon becomes so diluted with nitrogen that it neither prevents cyanosis nor maintains full anesthesia. Such troubles as occasionally arise with nitrous oxid anesthesia are principally due, in our opinion, to this dilution. To overcome this defect a mask which is at once light, easily adjusted, absolutely air tight on any face, quickly removable and not requiring to be held by the hand of the anesthetist is the greatest need. We recommend that a prize of $200 be offered for the invention of a mask fulfilling these requirements—the award to be made by our successors on this committee.

While nitrous oxid oxygen appears to afford the least deleterious of all forms of anesthesia, it is also unfortunately the most expensive. It is easily seen that the greater part of this cost is not for the nitrous oxid which is actually absorbed to induce anesthesia, nor for the oxygen which the patient consumes. The patient is constantly exhaling CO_2; and even when a considerable amount of rebreathing is practiced, the removal of this substance from the mask and bag involves the waste of 10 to 20 times as much oxygen, and 50 to 100 times as much nitrous oxid. It is the necessity of removing CO_2, therefore, which is the source of at least 90 per cent. of the cost of this form of anesthesia. As a few cents worth of sodium or potassium hydroxid would absorb all the CO_2 exhaled by the patient in many hours, a member of this committee has undertaken the problem of devising a simple form of absorber. The results of the experimental and clinical tests of this device will be reported later in THE JOURNAL of the American Medical Association.

(10) Finally we would respectfully recommend that the President of the Association in appointing our successors upon this committee make his selection not, as has been the custom in the past, wholly or almost wholly from the ranks of the surgeons, but rather from among those whose principal interest is in this field of work, and who during the past few years have themselves made contributions of value to the theory and practice of anesthesia.

Respectfully submitted,

YANDELL HENDERSON, Chairman.
THOMAS S. CULLEN,
E. DENEGRE MARTIN,
THOMAS W. HUNTINGTON,
FRED T. MURPHY.

Dr. J. N. McCormack, Kentucky, moved that the report of the Committee on Scientific Research be received as printed and referred to the Reference Committee on Reports of Officers. Motion seconded and carried.

The report is as follows:

Report of the Committee on Scientific Research

To the Members of the House of Delegates of the American Medical Association:

The Committee on Scientific Research of the American Medical Association begs leave to report as follows:

The present committee was appointed Jan. 2, 1912. There was then a balance in its fund of $1,250; on Jan. 24, 1912, Dr. Mary R. Lawson was paid a grant of $200 allowed her by the previous committee, and on April 3, 1912, Dr. G. B. Webb was paid a grant of $200, similarly allowed. This left $850 at the disposition of the committee and in response to applications received, grants have been allowed as follows:

1. Dr. R. M. Pearce, University of Pennsylvania, Philadelphia, $200 for investigations in his laboratory by Dr. J. H. Musser, Jr., on changes in the blood following splenectomy, and by Dr. J. H. Austin and Dr. A. B. Eisenbrey on utilization of parenterally introduced serum.

2. Dr. Benjamin White and Oswald T. Avery of the Hoagland Laboratory, Brooklyn, New York, $250 in support of an investigation to be conducted at the Saranac Laboratory for the study of tuberculosis, on the action of the split products of tuberculoprotein.

3. Dr. A. Sophian of the Division of Laboratories of the Department of Health of the City of New York, $200 to aid him in an investigation in Texas on protective inoculation against epidemic cerebrospinal meningitis.

4. Dr. K. K. Koessler, Chicago, $200 for work to be conducted in the Memorial Institute for Infectious Diseases, Chicago, on the etiology of scarlet fever.

This makes the total grants now pending $850, and this being the sum at the disposal of the committee, no further grants can be made for the present.

Since the last meeting of the House of Delegates, grants have been paid as follows:

1. Aug. 15, 1911. Dr. R. M. Pearce, Philadelphia, $200 for investigation by H. T. Karsner and J. H. Austin entitled "Studies of Experimental Bland Infarction," and for investigation by H. T. Karsner and J. B. Nutt entitled "The Relation of Toxic Doses of Horse Serum to the Protective Dose of Atropin in Anaphylaxis."

2. Sept. 5, 1911. Dr. E. C. Rosenow, Chicago, $200 in support of work on "Autolysis of Pneumococci."

3. Dec. 11, 1911. Dr. K. K. Koessler, Chicago, $200 in support of work on "Antibodies in Scarlet Fever."

4. Jan. 24, 1912. Mary R. Lawson, Boston, $200 for work on "The Development of the Tertian Malarial Organism."

5. April 3, 1912. Dr. G. B. Webb, Colorado Springs, $200 to further investigation on the "Production of Immunity by Inoculation of Living Bacteria."

April 26, 1912.

Respectfully submitted,

LUDVIG HEKTOEN,
GRAHAM LUSK,
EUGENE L. OPIE,
Committee on Scientific Research.

Report of Reference Committee on Sections and Section Work

Dr. Wesley T. Mulligan, New York, Chairman, presented the report of the Reference Committee on Sections and Section Work, as follows:

The committee has received three petitions for the creation of new sections as follows:

1. A Section on Physical Therapeutics.
2. A Section on Proctology.
3. A Section on Orthopedic Surgery.

We do not recommend the creation of a Section on Physical Therapeutics.

We do not recommend the creation of a Section on Proctology.

We do recommend the creation of a Section on Orthopedic Surgery.

Respectfully submitted,

WESLEY T. MULLIGAN, Chairman.
HUGH CABOT,
KENNETH C. J. MACKENZIE,
THOMAS D. DAVIS.

It was moved and seconded that the report be adopted.

After discussion, which was participated in by Drs. Curran Pope, Kentucky; Edward Jackson, Colorado; Hugh Cabot, Massachusetts; H. D. Arnold, Massachusetts; C. E. Cantrell, Texas; G. Wythe Cook, District of Columbia, and Wesley T. Mulligan, New York. Dwight H. Murray, New York, moved

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as an amendment that that part of the report relating to a Section on Proctology be recommitted to the committee.

Motion seconded.

Dr. J. R. Pennington, Illinois, was accorded the privileges of the floor and discussed the advisability of establishing this proposed Section on Proctology, after which the subject was further discussed by Drs. Edward Jackson and C. E. Cantrell.

The Chair put the amendment of Dr. Murray and it was declared lost.

The original motion to adopt the report was put and carried.

Dr. W. R. Tipton, New Mexico, Chairman, reported progress for the Reference Committee on Rules and Order of Business, and asked for further time, which on motion, duly seconded, was granted.

Report of Reference Commitee on Medical Education

Dr. J. H. J. Upham, Ohio, Chairman, presented the report of Reference Committee on Medical Education, as follows:

To the Members of the House of Delegates of the American Medical Association:

Your committee has carefully considered the Report of the Council on Medical Education; it has conferred with the Council and has listened to suggestions from members of the Association interested in these educational problems. We wish again to congratulate the Council on the continuance of its excellent work.

The Council's report of the results of the third inspection of medical colleges is one of the most important matters brought before us this year. The Reference Committee, with the consent and approval of the Council, recommends a slight change in the classification from that offered in the Council's report to the House of Delegates, namely, Class A + and Class A in place of Class A and Class A —.

The classification recommended is as follows:

Class A +.—Colleges receiving a rating of 70 per cent. or above in each and all of the divisions of date.

Class A.—Colleges receiving a general average of 70 per cent. or above, but who in one, two or three divisions fall below a rating of 70 per cent.

Class B.—Colleges receiving a rating below 70 per cent. in four or more divisions, but attaining a general average of at least 50 per cent.

Class C.—Colleges receiving a rating of a general average below 50 per cent.

This is essentially the same classification that has been used before, with the exception of a subdivision of Class A, which gives what we regard as proper recognition to those colleges which are most successfully carrying out the standards which the Association has approved.

The Reference Committee further recommends that after Jan. 1, 1914, all colleges to be included in Class A must require not less than one year of college credits in chemistry, biology, physics and a modern language, or two or more years of work in a college of liberal arts, in addition to the accredited four-year high-school course.

The committee would call attention to the results already accomplished since the Council made its classification of medical colleges and since it made this classification public. The Council's first classification was reported in 1907. Since then fifty-three colleges have been closed, twenty-seven by merger and twenty-six by extinction. Sixteen of these have occurred in the past two years since the classification was made public. Of the twenty-six colleges which have become extinct, twenty-three belonged to Class C, one to Class B, and two to Class A. It is evident that this educational campaign is having its greatest effect on the Class C schools, as was intended.

The Council wishes us to state that it will be glad to inform any medical college of the direction in which it needs improvement in order to elevate its standing, and it will also be glad to discuss the rating of any college.

The Reference Committee approves of the Council's suggestion in reference to the investigation of hospitals, and recommends that the Council be authorized to undertake such an investigation with reference to the opportunities opened to interns. The committee recommends that the Trustees be requested to furnish money for this purpose.

The committee recommends that the Council be authorized to invite to the next Annual Conference on Medical Education, some distinguished representative of the German medical educational methods, and that the Trustees be requested to provide a suitable honorarium.

The committee further recommends that the classification of medical colleges reported be published at the discretion of the Council. Respectfully submitted,

J. H. J. UPHAM, Chairman.
HORACE D. ARNOLD,
A. T. BRISTOW,
REID HUNT,
GEORGE W. GUTHRIE.

Dr. Arthur T. McCormack, Kentucky, moved, as a tribute to the Council on Medical Education, and particularly its Chairman, Dr. Bevan, that the report be adopted by a rising vote.

Motion seconded by several and carried.

Report of the Reference Committee on Legislation and Political Action

Dr. William A. Evans, Illinois, Chairman of the Reference Committee on Legislation and Political Action, stated:

1. That the committee had considered the matter of cooperation with the National Educational Association, and recommended that it be accepted and placed on file.

2. As to the report of the Subcommittee on Public Health Education Among Women, the committee moved that the report be received, and that the subcommittee be commended for the excellence of its work.

3. With regard to the report of the Subcommittee on Visual Standards for Pilots, the committee recommended that the report be received and placed on file.

4. As to the report of the Subcommittee on Prevention of Blindness, the committee recommended the adoption of the report of the subcommittee on Prevention of Blindness and also the following specific recommendations:

(a) *Resolved*, That the Secretary of the Council inform the State Boards of Health that it is the opinion of this Association that ophthalmia neonatorum be made a reportable disease.

(b) That the necessity of a study of trachoma in the United States is necessary, and that the Public Health and Marine-Hospital Service be requested to undertake a study of this disease, its prevalence, mode of spread and measures of prevention.

5. As far as the report of the Council on Helath and Public Instruction is concerned, the committee had considered all of the report beginning with page 62 of the Handbook and going to the top of page 74, and respectfully asked that this part of the report of the Council on Health and Public Instruction be approved and placed on file.

6. The next matter for consideration was embraced under the heading "Legislation" on page 74 of the Handbook. The committee suggested that the House accept the report relating to the sections extending from page 74 to the middle of page 75, "Bureau of Protection of Medical Research," and also that there be added this recommendation, that the Council be instructed to carry on a definite and vigorous policy of legislative activity.

7. Also, that there be added this:

Resolved, That the Council on Health and Public Instruction and Secretary of the American Medical Association be instructed to carry on an aggressive work for the increase of membership and a more complete organization.

8. As to the remainder of the report on pages 75 to 78, down to the middle third of the sub-head "Annual Conference," the committee reported its approval of these portions of the report, and recommended that they be adopted.

For the committee, WILLIAM A. EVANS, Chairman.

On motion, the first section of the report, as it involved the appropriation of money, was referred to the Board of Trustees, and on several motions the subsequent sections of the report were adopted. Finally the report was adopted as a whole.

Report of Reference Committee on Reports of Officers

Dr. Hubert Work, Colorado, Chairman, presented the report of the Reference Committee on Reports of Officers, as follows:

Your committee on Reports of Officers desires to make this additional report:

WHEREAS, No appropriation was made last year for the special work of the Committee on Anesthetics; and

WHEREAS, The work of this committee has been arduous, valuable and apparently completed to date;

Resolved, That the Trustees be instructed to reimburse Dr. Yandell Henderson for the expenses incurred and that the committee be discharged.

The Committee on Reports of Officers beg to recommend that the selection of an official button or emblem for the Association be referred back to the Board of Trustees with power to act, and that they do act.

HUBERT WORK, Chairman.
J. W. ELLIS,
J. W. YOUNG,
DONALD CAMPBELL.

It was moved that the report be adopted. Motion seconded.

After discussion by Drs. G. Lane Taneyhill, Maryland; W. W. Grant, Colorado; Jefferson R. Kean, U. S. Army; George W. Guthrie, Pennsylvania; Arthur T. McCormack, Kentucky, Dr. Taneyhill moved as an amendment the following:

WHEREAS, The House of Delegates of the American Medical Association at Los Angeles adopted the recommendation of the Reference Committee on Reports of Officers, June 29, 1911, recommending the new button;

Resolved, That the Board of Trustees be and are hereby instructed, after receiving competitive bids, to have a sufficient number of the new button manufactured for the use of those members who may choose to purchase the same.

Seconded.

Dr. George Wythe Cook, District of Columbia, moved as a substitute that in any action the Board of Trustees may take in regard to the button they disregard the Red Cross button.

Motion seconded.

Dr. Luther B. Kline, Pennsylvania, moved that the substitute be laid on the table.

Motion seconded and carried.

After further discussion by Drs. Grant, Taneyhill and Cantrell, Dr. George W. Guthrie, Pennsylvania, moved that the Board of Trustees be authorized to change the lettering on the margin of the button according to their discretion; that if it is better to have American Medical Association on it instead of A. M. A., the Board be authorized to make this change.

Motion seconded and carried.

On motion of Dr. Taneyhill, the report of the committee was then adopted as amended.

Report of Reference Committee on Miscellaneous Business

Dr. W. E. Anderson, Virginia, Chairman, presented the report of the Reference Committee on Miscellaneous Business, as follows:

1. In regard to report of Committee on Nomenclature and Classification of Diseases, which report you will find in the Handbook of the House of Delegates, your committee recommends the approval and adoption of the very excellent report and the continuance of this committee.

2. Reporting on a motion offered by Dr. A. T. Bristow, i. e., that a committee be appointed by the President to communicate with the officers of the British Medical Association with a view to finding out whether a joint meeting of the British Medical Association with the American Medical Association is desirable and possible in the future, we recommend the adoption of the motion as presented.

3. Considering the supplementary report of the enlarged committee appointed to consider the establishment of a Relief Fund and Tuberculosis Sanitarium for Physicians and a contribution to "the home for widows and orphans of physicians" at Baltimore, we recommend the adoption of the committee's report and that the committee in accordance with its request be discharged.

Respectfully submitted,
W. E. ANDERSON, Chairman.
JAMES W. FLEMING,
J. F. HIGHSMITH.

On motion, the report was adopted.

Dr. Washburn, a delegate from the Hospital Section, offered the following:

Moved that the committee appointed by the Hospital Section to consider the matter of inspection and classification of hospitals be approved, and that the Board of Trustees be authorized to appropriate such a sum as may be necessary to meet the expenses of this committee.

On motion, this was referred to the Board of Trustees.

Dr. William A. Evans, Illinois, stated that the Section on Preventive Medicine and Public Health had presented to him several matters which it desired to be introduced to the House.

1. *Resolved*, That there be formed a permanent Committee on Industrial Hygiene to cooperate with the American Association of Labor Legislation in the promotion of the study and prevention of industrial diseases.

On motion, this was referred to the Reference Committee on Hygiene and Public Health.

2. *Resolved*, That the resolution presented by Dr. H. M. Bracken, St. Paul, providing a new clause in the Principles of Medical Ethics, be referred to the Judicial Council.

Motion seconded and carried.

3. That the report of the Committee on Standard Methods of Procedure for the Control and Prevention of Tuberculosis, read by Dr. Ravenel, be referred to the Reference Committee on Hygiene and Public Health.

4. That a resolution on venereal diseases be referred to the same committee.

5. That a recommendation by Dr. Oscar Dowling, Louisiana, that definite instruction be given to the public on the importance of a pure milk-supply and the necessity for effecting supervision to obtain the same; that the score card of the official dairy instructors' association be adopted as the standard in the scoring of dairies; that the tuberculin test be required, and that legislation be urged to make effective the provisions named above, be referred to the Reference Committee on Hygiene and Public Health.

On motion, it was so referred.

6. That the following be referred to the Reference Committee on Legislation and Political Action:

MEMORANDUM RELATIVE TO THE REGULATION OF THE SALE OF OPIUM AND OTHER HABIT-FORMING DRUGS

No city can regulate the sale of these articles satisfactorily, because those desiring to obtain them in violation of city ordinances have merely to get them by mail or express from other cities.

No state can regulate this matter, because unscrupulous dealers and persons addicted to the use of such articles can obtain them by mail or express from other states.

While the state can regulate the traffic on these articles within its own boundaries in so far as relates to commerce by express, its control over commerce through the mail is practically wanting. The state has absolutely no control over the purchase of articles in other states, and the bringing of them into the state first referred to, since this is a matter of interstate commerce, and therefore exclusively under federal control. Theoretically, it is true, the state may establish a system of inspection with reference to traffic in such articles; but in so far as it relates to interstate traffic in these articles, this is utterly ineffective.

The sale of these articles within any state *for delivery in another state* does not come within the scope of the laws of the state first referred to, since this is a matter of interstate commerce.

The only way in which the matter can be satisfactorily controlled is for the federal government to establish a system of licensing or registration of those who desire to traffic in these articles across state lines. This the federal government is bound to do, and is endeavoring to do, not only in the interest of the health of this nation, but also because of certain treaty obligations that it has assumed with certain other nations, which are endeavoring to protect the welfare of their own citizens and to cooperate with the United States in protecting the citizens of this country.

For the reason stated the adoption of the following resolution is recommended:

Resolved, That the American Medical Association urge the enactment of stringent laws limiting interstate and foreign traffic in opium, cocain, and other habit-forming drugs to persons duly authorized to engage in such traffic, and preventing so far as lies within the power of the federal government the propagation, importation, and exportation of such substances, and their distribution within the United States, except for proper medicinal purposes.

On motion, the resolution was referred to the Reference Committee on Legislation and Political Action.

Dr. H. D. Arnold, Massachusetts, offered the following resolution:

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Resolved, That the President appoint a Committee on Anesthesia to consist of five members, for the purpose of continuing investigations in anesthesia, and that the Board of Trustees be requested to appropriate money for this purpose.

On motion, the resolution was referred to the Reference Committee on Miscellaneous Business.

Dr. Oscar Dowling, Louisiana, offered the following preambles and resolution:

WHEREAS, It is the sense of this body that postgraduate instruction in ophthalmology and otolaryngology is on an inadequate and unsatisfactory basis; and

WHEREAS, No fixed standards exist whereby the fitness of practitioners may be judged; and

WHEREAS, There are no restrictions which might deter men from entering on the practice of this specialty without adequate preparation; therefore, be it

Resolved, That this body respectfully requests the Council on Medical Education of the American Medical Association to supply this deficiency, namely

By the organization of postgraduate instruction in special and other hospitals supplied with adequate facilities in the treatment of diseases of the eye, ear, nose and throat; which instruction should cover a period of study of at least two years; that a degree be conferred on those students completing the course in a satisfactory manner; that the course of study be laid out by committees from leading special societies of the United States.

On motion, the resolution was referred to the Reference Committee on Medical Education.

Dr. H. A. Royster, a delegate from the Section on Surgery, asked unanimous consent, which was granted, to refer a resolution from the Section on Surgery to the Reference Committee on Sections and Section Work.

On motion of Dr. Edward Jackson, Colorado, duly seconded and carried, the Reference Committee on Sections and Section Work was authorized to receive communications from the sections directly and to report its recommendations thereon to the House.

Dr. Dwight H. Murray, New York, offered the following:

Resolved, That the following amendment to the By-Laws, Chapter IV, Section 5, be adopted: That the House of Delegates, at its last session shall elect a Speaker, who shall preside during the following twelve months and until his successor shall be elected.

On motion, this resolution was referred to the Reference Committee on Constitution and By-Laws.

Dr. Oscar Dowling, Louisiana, offered the following:

Resolved, That the Reference Committee on Miscellaneous Business bring before the House of Delegates a score card for doctors' and dentists' offices requiring that they be brought up to certain standards.

On motion, this resolution was referred to the Reference Committee on Miscellaneous Business.

At this juncture, Vice-President W. R. Tipton took the chair, and President Jacobi addressed the House.

On motion, a resolution suggested by Dr. Jacobi in connection with his remarks, was referred to the Reference Committee on Reports of Officers.

On motion, the House of Delegates adjourned until Thursday, June 6, 2 p. m.

(To be continued)

The Opening General Meeting

Tuesday, June 4, 1912

The general meeting was held in the Apollo Theater, and was called to order at 10:30 a. m. by the President, Dr. John B. Murphy, Chicago.

Prayer was offered by the Reverend Francis J. McShane.

On his arrival, the mayor of Atlantic City, the Honorable Harry Bacharach, was introduced by President Murphy.

The Mayor's Address of Welcome

Mr. President, Your Excellency, Ladies and Gentlemen.—I do not think Atlantic City has ever before been accused of being late, but to-day I must plead guilty to that charge, and perhaps it would have been better for you if the gentleman who had been announced to speak to you had made the address of welcome instead of myself, and if I should not be as eloquent as that gentleman, I assure you, nevertheless, it will not be lacking in sincerity.

Atlantic City is pleased to welcome all conventions, but particularly a convention such as this, representing the greatest people in our country, and to show you how pleased we are that you have come among us, last night I appointed one of your members a member of the City Council. (Laughter and applause.) Whether the President of the City Council made a mistake or not, I leave it to your judgment. He appointed him a member of the Finance Committee, while I thought he should have been on the Police Committee—at least this week (laughter), but I assure you we are more than pleased to see you, and particularly at this time. Atlantic City is to-day perhaps more in the public eye than any city in the country. Perhaps a great deal of it is justifiable, but we know a great deal of it is not so. What I mean to say is this, that there is a good deal being published in the papers to-day about our city. These reports are exaggerated as to the conditions which prevail from a moral standpoint, and most of them are untrue, and we are going to leave it to your judgment, to your confidence, honesty and integrity, feeling quite sure that when you leave Atlantic City you will be satisfied that you have not only visited the greatest seashore resort in the world, but a place where ladies can go unaccompanied on the Boardwalk from early morning until a reasonable hour at night unmolested. (Laughter). And we are confident you ladies will keep your husbands home at night, so that they won't have to go home early in the morning.

We are proud of our city, proud of the greatest number of our citizens, and we ask you to judge us. We have the greatest and largest number of hotels of any city in the country. We have the most progressive hotel men, the most progressive and broad-minded citizens in the country, and we ask you to pass your judgment on us as a city and as citizens. Atlantic City has requested me to present to you a little token of their esteem and to assure you that you can come in the evening or come in the morning, you can come when you like, and any time you may see fit to come we bid you a thousand welcomes. The oftener we see you, the more we adore you, and now, Mr. President, in behalf of Atlantic City, I present to you the key to our city [Here Mayor Bacharach handed to President Murphy a key which was decorated with silk ribbon], and if the ladies do not object I will say to you that to-night the curfew shall not ring. (Laughter and applause.)

President Murphy: The next address of welcome will be delivered by Dr. Daniel Strock, Camden, N. J., President of the Medical Society of the State of New Jersey.

Address of Welcome by the President of the New Jersey State Medical Society

Dr. Strock, in part, said: It is simply by the force of circumstances that the great honor has been assigned to me, as President of the Medical Society of the State of New Jersey, of welcoming the American Medical Association to this city, and this I do with great pleasure (Applause). The Medical Society of New Jersey antedates by ten years in age the Declaration of Independence. Ten years before the Declaration of Independence was adopted, the doctors gathered together and began the organization that we realize to-day as a great force in the State of New Jersey.

After referring to medical examining boards and medical matters of the state generally, Dr. Strock concluded by saying: On behalf of the State of New Jersey, I welcome you to this city and to the state and trust that your stay here will be profitable, pleasant and very enjoyable. (Applause.)

President Murphy: The commonwealth of the State of New Jersey is represented on this occasion by Governor Woodrow Wilson, who needs no introduction to this audience. (Applause.)

Governor Wilson's Address of Welcome

Governor Wilson was received with loud and prolonged applause and said:

Mr. President and Members of the American Medical Association, Ladies and Gentlemen.—I feel it a privilege, as representing the State of New Jersey, to welcome this great society to its session this year in Atlantic City. A great many people come to Atlantic City on all sorts of errands, most of them not serious. (Laughter.) The problem that Atlantic City is confronted by is that it is the refuge of the idle, and those

who are idle are apt to adjourn the ordinary standards of their lives. (Laughter.) But you are doubly welcome here because you have not come as idlers, but as those who study the more serious problems of our lives, both individually and nationally. Atlantic City is used now to investigation. (Laughter.) You have come as investigators, not to investigate Atlantic City except for your intimate knowledge of the make-up, the physical make-up of all citizens of the community (laughter), and I feel in facing a great association like this that I am facing a body of men and women who have a particularly intimate connection with the life of the country, because you are very much more than physicians individually. You are very much more than the advisers of individuals with regard to the problems of health. You are the guardians of communities. You are the guardians of communities not only with regard to those general sanitary problems which are summed up under the head of sanitation and general hygiene, for example, but of a great many moral problems also. In our days the old story that the physical welfare of man is very closely knit with the moral is very true, and as a man thinks so is he, a thing which comes very much nearer being a physical fact than is usually realized, because there is undoubtedly an air of morale in most of the problems that you have to deal with. At any rate, by way of preliminary determination and as counselors of individuals, you are the arbiters to some degree of the life of communities.

I have sometimes wished there might be some way of establishing an official connection between doctors and the state that has been found in the case of lawyers. Lawyers are officers of the court and are subject to discipline as such. They hold in their hands the honor of obeying and carrying out the laws of the commonwealth and they are held amenable on that basis. It is on that basis that men are dealt with for contempt of court and lawyers are held to a code which has nothing to do with their knowledge of the law. Similarly, it seems to me, the doctor, by reason of the license he holds is reputed to represent morality as well as the knowledge of the community. (Applause.) And the most interesting part of the profession is this, that knowledge is not vital unless it goes hand in hand with honesty and sympathy. I believe you will agree with me that one of the things to be regretted in modern times is that we have been obliged to specialize our professions to so great a degree, because in proportion as the medical profession is specialized, for example, the old family physician disappears. I remember going over in my memory a single year of my family life with my children when they were small, and finding that I had called in consultation thirteen different specialists. (Laughter.) There was no ill luck in the thirteen, because it all came out very happily. But where I had summoned thirteen specialists my father would have summoned one family physician. My father would not have got as good advice as I got, and yet I lived through it. (Aplause.) But every time he sent for his doctor he was sending for a personal friend. He was sending for a man who had his competency in a peculiar degree. He was sending for a man who walked along the paths of life with him as a comrade and confidant. There was something very vital, there was something very useful in that relationship, and although we have certainly yielded only to necessity, it is unfortunate that we should have been obliged to specialize so much as we have, and therefore it is necessary, it seems to me, if you will permit me to suggest it, that we regeneralize our sympathies. I remember saying once, when I was following out a certain occupation, that I understood the chief business of a university was to make young men as unlike their fathers as possible. I will hasten to explain that as I did on that occasion. I did not then, nor do I say that now in disrespect to the fathers, but merely this: By the time a man was old enough to have a son in the university he became so immersed in a special occupation and narrowed to the point of a single calling, it was advisable that his son should be taken out on some place of vantage where he could see the world instead of seeing a single individual, a single community, a single profession. I understood that to be the business of the university to regeneralize each generation of youngsters, show them the nation, show them the great infinite variety of human interests, show them the map of the world, so that they would never forget, at any rate, their general geographic relations to the races of mankind. So, it seems to me, every profession, particularly a profession so absorbed as yours is, and bent on investigations, must find it necessary to refresh its general sympathies by reconnecting itself with the wider questions of our modern life. As an American, I feel that the task of the statesman in our day is analogous to the task of the surgeon. There is a great deal that is necessary to be cut out of modern life (laughter), and yet we must be very careful not to injure any of the sound tissue in cutting it out, and the various processes of politics are not unlike the processes with which you are familiar. The preliminary agitations of a political campaign are a sort of prognosis (laughter) and the platforms are a sort of diagnosis, and then follows the critical part. (Laughter.) Then you have to study your materia medica; then you have to propose a particular operation and determine exactly what you are going to do in following up your diagnosis to remove the disease, or at any rate to apply some tonic which will enable nature to assist herself. (Laughter.) The moral of that sort of thing is, that the surgeon should know what he is about, and that rough and ready methods, methods of passion, methods of prejudice are of all things the most dangerous. (Applause.) They are the methods of the quack; they are the methods of the uneducated, the uninstructed, the unlicensed practitioner, and therefore I have a sort of sympathy with you. (Laughter.) It is very much easier for you to get at the difficulty, and the particular phenomenon with which you have to deal than it is for the men who are wandering abroad amidst the general phenomena of society, and yet, it seems to me, that you can be infinitely instrumental in assisting the statesman, because there are a great many evidences and symptoms at this time of hysteria (laughter), and if you will only hurry home from this convention and calm your communities down, we may be able to transact business. (Roars of laughter.)

I am very glad to have you all at once in New Jersey, but you cannot calm New Jersey down by merely sitting here in Atlantic City. It will be necessary for you to disperse to your homes and get to work on the people you know. I know a great many people whom I would like to get to work on (laughter), if I only knew the proper cure for hysteria, but never having, happily, felt the symptoms myself, I am unsympathetic about it. And yet, seriously, ladies and gentlemen, speaking of the problems of our life, they are all one. The thing I am particularly impatient with, ladies and gentlemen, is dividing our lives and our interests into sections and supposing you know nothing about anything, except one thing. The whole problem of modern society is infinitely complicated, just because it is variously specialized, and it should be our object to avoid the separation of interests, it should be our object to effect a union of purpose, to unite ourselves with one another, not as a body of competing interests, but a body of unified interests, moving forward to the common goal of general service. That, it seems to me, is the problem of all intelligent men in the United States and in the world at large. I cannot do better, therefore, than to ask you in your modern occupation to harmonize the various parts of our whole life to one another, so that heat, hostility and friction may be taken out and all the sweet and wholesome processes of life may be restored. (Loud and prolonged applause.)

President Murphy: Before retiring from the administrative office of this organization, I wish to express to you my sincere appreciation of the uniform and hearty support which you have given me during my administration. It is a pleasure in retiring, and an honor, to have the opportunity to recede from this office and from this position and turn it over to a man whose name is synonymous with the highest ideals and practices of the American or any other medical profession in the world. (Applause.) It is a pleasure to turn this office over to the Nestor of American medicine (applause), to a man who needs no introduction to any medical audience, and no introduction to the people of a nation—Dr. Abraham Jacobi of the City of New York, and of the world of medicine. (Loud applause.)

President Jacobi's Address

Dr. Jacobi then delivered his address as President of the Association. It was published in THE JOURNAL last week.

Dr. Thomas W. Huntington, San Francisco, Chairman of the Section on Surgery, introduced Professor Rovsing, of Copenhagen.

Professor Rovsing said he greatly appreciated the invitation that had been extended to him to attend this meeting of the American Medical Association, and he brought to the Association the best greetings from his countrymen in science. It was not only a great pleasure but a source of gratification to meet the splendid scientific men whom he had thus far met in this country. He thanked the Association most heartily and cordially for the very kind and generous reception he had received.

After some announcements by the Chairman of the Committee of Arrangements, the general meeting adjourned.

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